THE BEAUTIES OF NATURE AND ART DISPLAYED, IN A TOUR THROUGH THE WORLD;

CONTAINING

I. A General Account of all the Countries in the World, remarkable for either Natural or Artificial Curiosities; their Situation, Boundaries, Extent, and Divisions; their Rivers, Air, Soil, chief Cities, &c.

II. A particular Account of the most curious natural Productions of each Country, in the Animal, Vegetable, and Fossil Kingdoms; of remarkable Mountains, Caverns, and Volcanos; of Medicinal and other singular Springs; of Cataracts, Whirlpools, &c.

III. An Historical Account of the most remarkable Earthquakes, Inundations, Fires, Epidemic Diseases, and other public Calamities, which have, at different Times, visited the Inhabitants.

IV. Extraordinary Instances of Longevity, Fertility, &c. among the Inhabitants; together with an Account of their most celebrated Inventions, Discoveries, &c.

V. Particular Descriptions of the most remarkable public Buildings, and other singular Productions of Art.

VI Curious Remains of Antiquity; remarkable Laws, Customs, and Traditions of the Inhabitants; together with a Summary View of the most extraordinary Revolutions among them.

Illustrated and embellished with Copper Plates.

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THE

BEAUTIES

OF

NATURE AND ART

DISPLAYED,

IN A

TOUR THROUGH THE WORLD

PART II.

Of BARBARY.

Natural Curioſities in the Animal, Vegetable, and Foſſil Kingdoms.

Continued from VOLUME IX.

THEY have a ſpecies of thruſh in Barbary, which is juſtly admired for the richneſs of its plumage. The head, neck, and back are of a fine light green, the wings of a lark-colour, the breaſt white, and ſpotted like a thruſh's, the rump of an elegant yellow, and the ends of the feathers of the wings and tail are tipped with the ſame colour. This bird is not very common, appearing only in the ſummer-months, when figs are in ſeaſon.

The Capſa Sparrow, ſo called from a city of that name in Tunis, is a curioſity that deſerves our notice as much as any other of this kind. It is about as big as the common houſe ſparrow, and is frequent in the date-villages to the weſtward of the lake of Mœris. The colour of it is like that of a lark, except on the breaſt, which is ſomewhat lighter, and ſhines like a pigeon's. But what this bird is admired for, is its exceeding ſweet and melodious note, infinitely preferable, ſays Dr. Shaw, to that of the Canary bird or nightingale. On this account ſeveral attempts have been made to bring it to Kairoan, and other parts of the country; but it has been always found of ſo delicate a nature, as to languiſh and pine away upon being removed from its native climate.

The Rhaad or Saſſaf is a gregarious bird, of which there are two ſpecies in Barbary, the ſmaller whereof is as big as an ordinary pullet, but the larger is about the ſize of the Houbaara, different alſo from the leſſer in having a black head, with a tuft of dark blue feathers immediately below it. Each ſpecies of them has a white belly, the back and wings of a buff-colour ſpotted with brown, the tail lighter, but marked all along with tranſverſe ſtreaks of black. The word Rhaad denotes thunder in the language of the country, and is ſuppoſed to be a name given to this bird from the noiſe it makes, like our partridges, in ſpringing from the ground as Saſſaf, the other name, expreſ-

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ſes the beating of the air, when the bird is got upon the wing.

Another bird of the gregarious kind is called the Kitawiah, which, like the the Rhaad, wants the hinder toe, and frequents the moſt barren parts of Barbary, as the Rhaad does the more fertile parts of the country. In ſize and ſhape it reſembles a dove, and, like ſome birds of that kind, has ſhort feathered feet. Its body is of a livid colour, with black ſpots; the belly is blackiſh, and upon the throat there is the figure of a half moon in a beautiful yellow. Each feather of the tail has a white ſpot at the extremity, and the middle one is longer than the reſt, and pointed. The fleſh is of the ſame colour with that of the Rhaad, and is not of an agreeable flavour, but of eaſy digeſtion.

Among the more curious birds of Barbary, we may add to the eagle kind, the Karaburno, an aſh-couloured hawk, about the bigneſs of our buzzard, with a black bill, yellow ſhort feet, the back of a bluiſh colour, the pinions of the wings black, with a whitiſh tail and belly.

They have a kind of Water-Hen in Barbary with a white ſpotted wing, and dark green feet. It is leſs than a plover, has a black bill, an inch and a half long, the belly and breaſt of a dark-brown colour, and the back ſtill darker. The rump is white below, and variegated above with black and white ſtreaks.

As to animals of the lizard and ſerpent kind, moſt of thoſe which have been deſcribed in the account of Egypt, are common in ſeveral parts of Barbary, particularly the Thaibanne, a large ſerpent, of whoſe ſkin Dr. Shaw ſays, he has ſeen purſes made, which were four inches or more in diameter.

The Zurreike is another ſerpent common in the deſarts, which is uſually about fifteen inches long, of a ſlender body, and remarkable, as the name ſeems to imply, for darting itſelf along with great ſwiftneſs.

But the moſt malignant of this claſs of animals is the Leffah, which is of a leſs uniform turn of body than the ſerpent laſt deſcribed, and ſeldom above twelve inches in length. The *Torrida Dipſas* of Lucan anſwers very well both to the name, which ſignifies to *burn*, and the venomous quality of this ſerpent.

The Taitah is another ſpecies of ſerpent, between which and the Leffah, the Arabs ſay, there is the ſame antipathy as naturaliſts have long ago aſſigned between the chameleon and the viper; and that a drop of clammy juice let fall by the Taitah upon the Leffah, will throw the latter into ſuch convulſions as are attended with almoſt immediate death.

Amongſt the ſpecies of locuſts to be found in Barbary, our author mentions one of three inches in length, of a brown colour, with the fore

fore legs armed with ſtrong horny claws. Another ſort, of the ſame ſize, and of the cucullated kind, has its upper wings ſtreaked with a light green, and the membranaceous ones chequered with fleſh-colour, brown, and ſcarlet. There is a third ſpecies about two inches long, with beautiful green wings, whoſe chief characteriſtics are two antennæ, which project from the forehead like a couple of feathers.

The ſcorpion, in conſideration of its noxious qualities, may claim the next place after the locuſt. Some of the ſpecies are long and ſlender, others rounder and larger; but each of them has a tail conſiſting of ſix joints, not ſeven, as ſome antient writers have aſſerted. Thoſe on this ſide of mount Atlas are not very hurtful, the ſting being only attended with a ſlight fever, and the application of a little Venice treacle ſoon aſſuaging the pain. But the ſcorpions of Zaab, and moſt other parts of the deſart, as they are larger and of a darker colour, ſo their poiſon is more malignant, and frequently proves mortal.

The bite of the Boolakaz or Rhax is of the ſame venomous nature; and it is computed that twenty or thirty perſons die every year by the hurt received from this animal and the Leffah.

VEGE-

VEGETABLES *and* FOSSILS.

THE Cicer, or Chich Pea, is very much cultivated and eſteemed in Barbary. This ſort of pulſe is moſt valued when parched, being then a favourite food to perſons of all ages and diſtinctions. For this purpoſe there are copper pans and ovens in almoſt every ſtreet of the Eaſtern cities; and the method of parching theſe peaſe ſeems to be of great antiquity. When parched they are called Lebleby, and ſome writers have taken them for the pigeon's dung mentioned in ſcripture at the ſiege of Samaria. It is certain, ſays Dr. Shaw, that this pulſe is pointed at one end, and acquires an aſh colour in parching; and as the firſt circumſtance anſwers to the uſual figure, the other to the uſual colour of pigeon's dung, the ſuppoſition is not entirely groundleſs.

They have a ſmall parſnip in Barbary, ſomewhat like a turnip, with fibrous roots, which has a taſte ſo agreeably pungent, that it is very much eſteemed, and ſold by weight. Beſides our common garden herbs, they have calabaſhes, and ſeveral other productions of the vegetable kind, which give a reliſh to their ſoups and ragouts? nor ſhould their coriander be omitted, which has always a principle ſhare in the Mooriſh cookery. Cauliflowers arrive to great perfection in Barbary, inſomuch that Dr. Shaw tells us he has ſeen ſeveral that were very white, ſolid, and compact, meaſuring a yard

yard or more in circumference. Their muſk melons are little ſuperior to ours in the richneſs of their taſte, but their water melons exceed any that are raiſed in the northern climates. This laſt ort ſeems to be providentially cultivated for the ſouthern countries, as it affords a cool refreſhing juice, quenches thirſt, mitigates feveriſh diſorders, and thereby compenſates, in a great degree, for the exceſſive heats to which thoſe countries are ſubject.

We have already given an account of the palm or date tree, of which there are great numbers in Barbary, where it is uſual with perſons of better faſhion to entertain their gueſts at a wedding, the birth of a child, or upon any extraordinary occaſion, with the honey, as they call it, of the date-tree. This they procure by cutting off the head of one of the more vigorous kinds, and ſcooping the top of the trunk into the ſhape of a baſon. When the ſap aſcends it lodges in this cavity, at the rate of three quarts or a gallon a day, during the firſt week or fortnight; after which the quantity daily diminiſhes, and in ſix weeks or two months the juice is entirely conſumed, the tree becomes dry, and is fit for nothing but fire wood or timber. This liquor, which has a more luſcious ſweetneſs than honey, is of the conſiſtence of a thin ſyrup, but ſoon grows tart and ropy, acquiring an intoxicating quality, and yielding by diſtillation an agreeable ſpirit.

There

There is a ſhrub very common in the deſarts of Barbary, which has the leaves, prickles, flower, and fruit of the Jujeb, only with this difference, that the fruit is round, ſmaller, and more luſcious, and the branches are not ſo pointed or crooked. This fruit is in great repute, and ſold in the markets all over the ſouthern diſtricts of the kingdoms of Algiers and Tunis.

In thoſe kingdoms they have a ſpecies of apricot, uſually of the ſize and ſhape of a nectarine, and with the ſame property of not parting from the ſtone. The eating of theſe is never attended with a ſurfeit, whereas the common apricot is very dangerous, occaſions a variety of fevers and dyſenteries, and is called by a name that ſignifies the Killer of the Chriſtians. They have two or three ſpecies of plums and cherries, but none of them either in plenty or delicious. The cherry has been formerly in ſuch eſteem, that it continues to be called the Berry of the King. Their nectarines are larger than ours, and of a better taſte; and their peaches, beſides their excellent flavour, will commonly weigh ten ounces. Some of their pomegranates are three or four inches in diameter, and of a pound weight, Nor ought we to omit the prickly pear, called the Fig of the Chriſtians, perhaps from its being originally brought from Europe. Many families live upon it during the months of Auguſt and September; though it is never known to tinge the urine of a bloody colour, as it is

ſaid

ſaid to do in America. The wallnut and olive tree are propagated all over Barbary, but the haſel, filbert, gooſeberry and currant-tree, are ſcarce to be met with in the country.

The lemon and Seville orange-tree, eſpecially the former, are in a continued ſucceſſion of fruit and bloſſoms; but the China orange is not a native of the country, and only bears towards the latter end of autumn.

Among the foſſils of Barbary, there are few curioſities. Here are mines of iron, copper, and other metals; and near Algiers and Bona, is found a ſoft flaky ſtone, which is frequently gilded over with gold like ſpangles, as the ſparry matter that fills up the fiſſures glitters with thoſe that imitate ſilver.

Beſides the common mould or ſoil of Algiers, there are two or three kinds of pipe and potter's clay, the former of which generally burns red. Fuller's earth is alſo dug in great abundance; to which we may add the Steatites or ſoap earth, which is in great eſteem in the bagnios for cleanſing and ſoftening the ſkin. Lac Lunæ, which the Arabs ſometimes uſe in ſtaunching blood, lies uſually in the ſutures of ſome laminous rocks in one part of the country, and a hard ſpecies of Almagra or Spaniſh Bole occurs frequently in another.

The iron of the kingdom of Algiers is white and good, but is not found in any great quantity.

tity Some of the mountains have a rich ponderous ore, with a mixture of cinnabar, but no mines have been opened there as Dr. Shaw was informed. They have rich lead ores, from which large quantities of that metal might be obtained, if their mines were under a better regulation. Their method of refining it, is to put layers of wood and ore alternately upon each other; and ſetting the pile on fire, they frequently obtain eighty pounds of metal from one quintal of ore.

SPRINGS, CAVERNS, &c.

THOUGH Barbary in general is but indifferently furniſhed with ſprings of water, there are ſome which are remarkable for their qualities. Near the town of Elhamma, on the frontiers of Tunis, there is a hot ſpring, the water whereof is conveyed to the town by an aqueduct, but is ſo warm and impregnated with ſulphur, that it is ſcarce drinkable till it has been expoſed to the air for four and twenty hours. Theſe hot baths, which have little hovels built over them to ſhelter them from the weather, are reſorted to from all parts of the kingdom. One of them is called the Leper's Bath, and below it the water ſtagnates and forms a pool, which perhaps may be the Lake of Lepers, mentioned by Leo. The water

ter of theſe ſprings is perfectly clear, and ſoft to the palate.

Near the city of Conſtantina, in the kingdom of Algiers, there is a very hot ſpring, and at a little diſtance another that is ſurprizingly cold, with a ſtone ſtructure embelliſhed with ſtatues and other ornaments. The people thereabouts, who are very ignorant, have a notion that this place was a college, the maſters and ſcholars of which being very wicked were turned into theſe ſtatues. Nor is this the only ſuperſtitious opinion that prevails among them, eſpecially the women, for there are great numbers of ſnails bred among theſe ſprings, which their marabouts, a ſort of conjuring prieſts, very much regarded, have perſuaded them are malicious devils that do them all the hurt they can, giving them violent fevers, and other diſeaſes; and the credulity of thoſe poor people the marabouts fail not to turn to their own advantage.

In the ſame province of Conſtantina, Dr. Shaw takes notice of other hot ſpings, called the ſilent or inchanted baths, ſituated on a low ground ſurrounded with mountains. The waters of theſe fountains are of an intenſe heat, and at a ſmall diſtance there are others which upon compariſon are of as intenſe a coldneſs; perhaps therefore theſe may be the ſame with thoſe mentioned in the preceding paragraph. We may judge of the heat of theſe ſulphureous

ſprings by what the doctor tells us, that they will boil a large piece of mutton very tender in a quarter of an hour; and by what he farther obſerves, that the rocky ground the water runs over, to the diſtance ſometimes of a hundred feet, is diſſolved or rather calcined by it. When the ſubſtance of the rock is ſoft and uniform, then the water, by making every way equal impreſſions, forms it into the ſhape of cones or hemiſpheres, about ſix feet high, and nearly of the ſame diameter; which the Arabs maintain to be ſo many tents of their predeceſſors turned into ſtone: but when theſe rocks, beſides their ſoft chalky ſubſtance, contain ſome layers of harder matter, not ſo eaſily diſſolved, then, in proportion to the reſiſtance the water has met with, we are entertained with a confuſion of traces and channels, diſtinguiſhed by the Arabs into ſheep, camels, and horſes; nay, into men, women, and children, whom they ſuppoſe to have undergone the like fate with their habitations.

There are ſeveral other mineral ſprings in the kingdom of Algiers, and other parts of Barbary, either moderately warm and proper to bathe in, or too hot for that intention. There are alſo divers ſprings and rivers, whoſe names Doctor Shaw has given us, which are either very ſalt or brackiſh; and yet the Arabs, by long uſe and cuſtom, are very well reconciled to the taſte of the water. To theſe we may add the ſalt-pits of Arzew, which are about ſix miles

miles in compaſs, and appear like a large lake in winter, but are dry in ſummer, the water being then exhaled, and the ſalts left behind cryſtallized.

In the province of Ducala, in the kingdom of Morocco, there is a town called Maitbir, upon a mountain of the ſame name, noted for its Hundred Wells, or rather caverns cut down into the ſolid rock, which were probably deſigned for magazines to lay up corn in, where they pretend it will keep a hundred years. The common people, however, have a notion that they conceal ſome treaſure, and accordingly let themſelves down by ropes, with lights in their hands, in order to find it; but we do not learn that they have made any diſcovery of that nature. Theſe wells, as they are called, conſiſt of ſeveral ſtories one under another, the loweſt whereof is very large, and leads to ſeveral cells, in which are ſprings of freſh water.

SECT. III.

An Account of the moſt curious Arts, Manufactures, &c. of the Inhabitants of Barbary.

MOROCCO leather, the methods of preparing which have been already deſcribed, is one of the moſt curious manufactures in Barbary. Carpets are another conſiderable branch of the trade and manufactures of that country. They are made indeed of coarſer materials, and not ſo beautifully deſigned as thoſe of Perſia; but being cheaper and ſofter, they are preferred to lie upon by moſt ſorts of people.

At Algiers and Tunis they weave velvets, taffaties, and ſeveral kinds of ſilks; and all over theſe kingdoms they make a coarſe ſort of linen, but Suſa is noted for producing the fineſt. Theſe manufactures however, both of ſilks and linens, are ſo inconſiderable, that they ſcarce make enough for their home conſumption, the deficiency being frequently made up from the Levant and Europe.

The chief manufacture among the Kabyles and Arabs, Dr. Shaw informs us, is the making

ing woollen blankets and webs of goats-hair for their tents. This work is done only by the women, who make no uſe of a ſhuttle, but conduct every thread of the woof with their fingers. One of theſe blankets is uſually ſix yards long, and five or ſix feet broad, ſerving the Kabyle and Arab for a compleat dreſs in the day, and for his bed and covering in the night. They join together the two upper corners with thread or a wooden bodkin, and theſe being firſt placed over one of their ſhoulders, they afterwards fold the reſt of it round their bodies; but it is a troubleſome kind of garment, being frequently diſconcerted and falling upon the ground, ſo that the perſon who wears it is often obliged to tuck it up, and fold it anew.

In moſt of the towns and villages there are looms for weaving blankets, and alſo the Burnooſe, as they call their cloak or upper garment. This garment is of one piece, made narrow about the neck, with a cape to cover the head, and wide below like a cloak. The cape, however, is only occaſionally made uſe of during a ſhower of rain, or in very cold weather. Some of theſe garments are fringed round the bottom.

The girdles of the Arabs and Kabyles are uſually of worſted, very artfully woven into a variety of figures, and made to wrap ſeveral times about their bodies. One end of them being doubled and ſown along the edges, ſerves

them for a purſe; and they make a farther uſe of them, by fixing in them their knives, poniards, and inkhorns.

The turbant, which is a long narrow web of linen, ſilk, or muſlin, is folded round the bottom of theſe caps, and diſtinguiſhes, according to the order and faſhion of the folds, the ſeveral orders of ſoldiers not only from the tradeſmen and citizens, but from one another.

The greateſt part of the manufactures abovementioned are conſumed at home; and it may be farther obſerved, that the inhabitants of Barbary ſend few of their commodities to foreign markets. Oil, hides, wax, pulſe, corn, are the general produce of the kingdoms of Algiers and Tunis; but the firſt are either in ſuch ſmall quantities, or ſo much wanted at home, that corn may be reckoned the chief or only commodity for exportation. Formerly indeed, ſeven or eight thouſand tons of oil have ſome years been ſhipped off by our merchants from thoſe kingdoms; but there is ſo great a conſumption of oil among the natives themſelves, that the Algerines will ſeldom permit it to be exported into Chriſtendom. Greater quantities are produced near Tunis and Suſa; but then the Mooriſh merchants alone are allowed to buy it, obliging themſelves at the ſame time to diſpoſe of it at Alexandria, Damiata, or ſome other ports of the Ottoman dominions.

There

There is an obſervation which Dr. Shaw mentions to the honour of the weſtern Moors; namely, that they continue to carry on a trade with ſome barbarous nations bordering on the river Niger, without ſeeing the perſons they trade with, and without having once broke through that original charter of commerce, which from time immemorial has been ſettled between them. The method is this: at a certain time of the year a numerous caravan ſets out on this journey, carrying along with them ſtrings of coral and glaſs beads, bracelets of horn, knives, ſciſſars, and ſuch-like trinkets. When they arrive at the place appointed, they find, in the evening, ſeveral heaps of gold-duſt, lying at a ſmall diſtance from each other, againſt which the Moors place ſo many trinkets as they judge will be taken for the value. If the Nigritians, the next morning approve of the bargain, they take away the trinkets and leave the gold, or elſe make ſome deductions from the heaps; and thus they tranſact their buſineſs without the leaſt inſtance of diſhoneſty or perfidiouſneſs.

SECT.

SECT. IV.

Particular Deſcriptions of the moſt remarkable public Buildings, and other ſingular Productions of Art in Barbary.

THE imperial palace in the city of Morocco has the appearance of a fortreſs, being ſurrounded by a ditch, and high walls, flanked with towers and other works. The walls have but two gates, both large and ſtately; the one looking towards the country, the other towards the city. The royal apartments are covered with leaf gold, particularly about thirty halls, or rooms of ſtate; and the magnificent galleries leading from one to the other. The gardens are very beautiful, being adorned with fiſh-ponds, terraces, and every embelliſhment that is noble and delightful, in the Mooriſh taſte. In the middle of this fortreſs ſtands a magnificent moſque, remarkable for its brazen gates, and other ornaments, particularly its high tower, on the top of which were formerly four golden balls, one above another, fixed on a ſtrong bar of iron, which ran through them all. This with ſome other moſques, chiefly built of marble, and leaded on the top, a few colleges and hoſpitals, and a handſome bridge, are

are all that is left of the antient ſplendor of this city, which is run to ſuch decay that many of the ſtreets are quite uninhabited.

Among the vaſt number of moſques in the city of Fez, which ſome compute to be above five hundred, there are reckoned fifty of the firſt rank, all of them well built and endowed; one of which, according to Gramaye, is half a league in compaſs, and has thirty large gates. The Minaret or tower belonging to it is of a prodigious height, and ſupported by fifty ſtately pillars. The body of the building is covered with ſeventeen principal arches or roofs, beſides a vaſt number of inferior ones, all of them together ſuſtained by fifteen hundred large colums of white marble. A vaſt number of lamps, ſome of a prodigious ſize, are kept continually burning in this moſque; and the ciſterns for people to waſh in before they go to prayer, are ſaid to be four hundred. It ſtands in the heart of the town, and is eſteemed the largeſt and richeſt in all Barbary. Within the incloſure of this moſque there is likewiſe a ſtately college, and the public buildings of the city in general are beautiful and majeſtic.

Though the two laſt-mentioned cities are commonly reckoned the capitals of the two kingdoms, which make up the empire of Morocco, the reſidence of the imperial court is now at Mequinez, a conſiderable city about forty miles weſt from Fez, which is adorned with moſque, colleges, and other noble ſtructures,

tures, but eſpecially with the imperial palace, which is as large as the town itſelf, and exceeds any thing of the kind in that part of the world. It ſtands higher than the city, is ſurrounded with thick white walls, and conſiſts of a great number of courts, having within it two moſques with very high ſteeples, but none of the moſt regular ſtructures. In one part of this palace is the Seraglio for the Emperor's wives, concubines, and their eunuchs; another contains the imperial apartments, halls of audience, &c. a third is allotted to the Emperor's artificers; and a fourth to the guards, magazines, artillery, &c. Every part forms a ſpacious ſquare, and the whole ſtructure is about three miles in compaſs. The galleries are finely adorned with Moſaic work and other decorations; the gardens, walks, pavements, alleys, &c. are kept very neat, and every thing appears ſuitable to the reſidence of a great Monarch.

It has been obſerved, that the great moſque at Fez is looked upon as the moſt ſuperb ſtructure of that kind in Barbary; but doctor Shaw ſays, that one at Kairwan or Kairoan, in the kingdom of Tunis, is accounted the moſt magnificent, as well as the moſt ſacred, of any in that country. The inhabitants told the doctor, for a Chriſtian is not permitted to to enter the moſques of the Mahometans, that it is ſupported by at leaſt five hundred granite pillars; and yet among the great variety of columns, and other antient materials employed in this large

large and beautiful ſtructure, he could not be informed of one ſingle inſcription.

The method of building both in Barbary and the Levant, ſeems to have continued the ſame, from the earlieſt ages, without the leaſt alteration or improvement. For as there is a near relation between the preſent Mooriſh buildings, and thoſe that are occaſionally mentioned in the Holy Scriptures, it is preſumed that an account of the ſtructure and contrivance of the former may contribute to the clearing up ſome difficulties that have ariſen from not rightly comprehending the faſhion of the other.

Large doors, ſpacious chambers, marble pavements, cloiſtered courts, with fountains in the middle, are certainly conveniencies, ſays Dr. Shaw, very well adapted to the circumſtances of theſe climates, where the ſummer-heats are extremely intenſe. Beſides, the jealouſy, which maſters of families commonly entertain, is leſs liable to be alarmed, whilſt all the windows open into private courts, except ſometimes a latticed window or balcony towards the ſtreet, which are only opened during the celebration of ſome public feſtival.

If we quit the ſtreets of their cities, which are uſually narrow, with ſometimes a range of ſhops on each ſide, and enter into any of the principal houſes, we firſt paſs through a porch or gate-way, with benches on each ſide, where the

the maſter of the family receives viſits and diſpatches buſineſs; few perſons, not even the neareſt relations, having admiſſion farther, except upon extraordinary occaſions. We next advance into the court, which, lying open to the weather, is paved with ſtone or marble, according to the owner's ability, in order to carry off the water. This court is made uſe of to receive large companies, as upon the celebration of a marriage, the circumciſion of a child, or ſuch-like occaſions; and it is then covered with mats or carpets for their more commodious entertainment. It is likewiſe uſual at theſe times to have the court ſheltered from the heat or inclemency of the weather, by a veil, as the Doctor calls it, which being expanded upon ropes from one ſide of the parapet-wall to the other, may be folded or unfolded at pleaſure.

The court is generally ſurrounded with a cloiſter, over which, when the houſe has one or more ſtories, a gallery is erected of the ſame dimenſions, having a balluſtrade, or a piece of carved or latticed work, going round about it. From the cloiſter and gallery doors open into large chambers, of the ſame length with the court, but ſeldom or never communicating with each other. A whole family frequently lives in one of theſe chambers, which makes their cities ſo exceedingly populous, that the plague always ſweeps away great numbers.

People

People of better faſhion hang the chambers of their houſes with velvet or damaſk from the middle of the wall downwards, the reſt being adorned with ingenious wreathings, and devices in ſtucco and fret-work. In ſuch houſes the ceiling is uſually of wainſcot, either curiouſly painted, or thrown into pannels with gilded mouldings and ſcrolls of the Koran intermixed. The floors are laid with painted tiles or plaiſter of terrace; and as they do not uſe chairs, but ſit croſs-legged, or lie at length upon theſe floors, they have them conſtantly ſpread with carpets, ſometimes very rich and beautiful. For their farther eaſe a row of damaſk or velvet bolſters is ranged along each ſide of the floor; and at one end of each chamber there is a little gallery, raiſed four or five feet above the floor, with a balluſtrade in the front of it, where their beds are placed.

The ſtairs are ſometimes in the porch, ſometimes at the entrance into the court; and when there is one or more ſtories, they are continued through a corner of the gallery to the top of the houſe, which is always flat, and covered with a ſtrong plaiſter of terrace, from whence the rain water falls into ciſterns below the court. The terrace is ſurrounded by a wall breaſt high, or elſe with balluſtrades or latticed work, to prevent people's falling down; for upon theſe terraces they hang their linen to dry, prepare figs and raiſins, enjoy the cool breezes of the evening, converſe with one another, and offer up their devotions. By this

means, when one of the eaſtern cities is built upon a level ſpot of ground, a man may paſs from one end of a ſtreet to the other along the tops of their houſes. Such is the manner and contrivance of the eaſtern houſes in general; from whence Dr. Shaw takes occaſion to explain the caſe of the parylitic, ſaid to be 'let 'down through the roof,' (Luke v. 19.) which circumſtance has lately given great offence to ſome perſons. This pretended difficulty the Doctor very learnedly removes, by ſhewing there is no neceſſity to ſuppoſe that a 'breach was made in the tiling, or any thing of that nature; but that the patient was carried to the top of the houſe, and thence, after the veil abovementioned was drawn away, let down through the opening 'into the midſt' (of the court) 'before Jeſus.'

To moſt of theſe houſes a ſmaller one is annexed, which ſometimes riſes one ſtory higher than the houſe, and at other times conſiſts only of one or two rooms and a terrace; whilſt others are built over the porch, and, except the ground-floor, have all the conveniencies of the larger houſe. From theſe there is a door of communication into the gallery of the houſe, kept open or ſhut according to the maſter's diſcretion; beſides another door, which opens immediately from a privy ſtairs down into the porch or ſtreet, without giving any diſturbance to thoſe in the houſe itſelf. In theſe back-houſes ſtrangers are uſually lodged nd entertained; in them the ſons of the family

mily are permitted to keep their concubines; and thither the men are wont to retire from the hurry and noiſe of their families, to be more at leiſure for meditation or diverſions.

With reſpect to the moſques of theſe countries, the Doctor tells us, they are built exactly in the faſhion of our churches, but inſtead of uſing ſeats and benches as we do, they only cover the floor with mats, upon which they perform their devotion. Near the middle of a moſque, particularly the principal one of each city, there is a large pulpit, balluſtraded round, with an aſcent to it of about half a dozen ſteps. Upon theſe, for our author was informed that no perſon is permitted to enter the pulpit, one of their prieſts places himſelf every Friday, which they call the day of the congregation, and either explains ſome part of the Koran, or exhorts the people to piety or good works. There is a niche in that part of the moſque which ſtands towards Mecca, whither the people direct themſelves during the whole courſe of their devotions; and this niche, as a judicious writer conjectures, repreſents the preſence, and at the ſame time the inviſibility of the deity. The moſques have minarets or towers, which a cryer aſcends at the appointed times, diſplays a ſmall flag, and advertiſes the people with a loud voice of the hour of prayer.

SECT. V.

Curious Remains of Antiquity in Barbary.

THERE are ſeveral remains of antiquity ſtill viſible in different parts of Barbary, which was antiently poſſeſſed by the Romans, Carthaginians, and other powerful nations. One of the places, now moſt remarkable in the kingdom of Algiers, for the extent and magnificence of its ruins, is Spaitha, the antient Sufetula, where there is ſtill ſtanding a magnificent triumphal arch of the Corinthian order. From this arch, all along to the city, which is about the diſtance of a furlong, there is a pavement of large black ſtones, with a parapet wall on each ſide. At a ſmall diſtance from the end of the pavement, ſtands a beautiful portico, built in the ſame manner with the triumphal arch, which leads to a ſpacious court where we ſee the ruins of three contiguous temples, whoſe roofs, porticos, and fore fronts are broken down, but all the other walls, with their proper pediments and entablatures, remain perfect and entire. In each of them there is a niche, which fronts the portico; and behind that in the middle temple is a ſmall chamber, which perhaps ſerved for a veſtry. Our author has given us a fine draught of theſe venerable ruins.

At

At a place called Jemme, in the kingdom of Tunis, there are ſeveral antiquities; as altars with defaced inſcriptions, a variety of columns, a great many trunks and arms of marble ſtatues, one of which is of the coloſſal kind in armour, another a naked Venus like the Medicean, both without heads, but apparently the workmanſhip of good maſters. What this place is moſt remarkably diſtinguiſhed by, are the remains of a ſpacious amphitheatre, conſiſting originally of ſixty four arches, and four orders of columns. The upper order, which Dr. Shaw ſuppoſes might be no more than an attic, hath ſuffered by the Arabs; and four arches have been blown up from top to bottom by a bey of Tunis, in a revolt of the Arabs, who made uſe of it as a fortreſs; otherwiſe, as to the outſide at leaſt, nothing could be more entire and beautiful. The platform of the ſeats and the galleries are ſtill remaining; and by comparing this with other antient ſtructures, it ſeems to have been built about the time of the Antonines, agreeing exactly in proportion and workmanſhip with the buildings of that age.

Beſides ſome antient ciſterns and common ſewers, there are ſcarce any tokens left of the magnificene of Carthage, the rival of Rome. We meet with no triumphal arch, or ſumptuous piece of architecture; no granite pillars, or curious entablatures; but the broken walls and ſtructures now remaining are either built in the Gothic manner, or according to that of the later inhabitants. Adjoining to the large public ciſ-

terns, indeed, which were near the weſtern wall of the city, we ſee the ruins of an antient and celebrated aqueduct, which may be traced to the diſtance of at leaſt fifty miles. It has been a work of extraordinary labour and expence; and that part of it which runs along the peninſula, whereon Carthage was built, was beautifully faced with hewn ſtone. At Arriana, a little village two leagues to the northward of Tunis, ſeveral arches of this aqueduct are entire, ſeventy feet high, and the pillars that ſupported them ſixteen feet ſquare. The channel that conveyed the water lies above theſe arches, being vaulted over, and plaiſtered with a ſtrong cement. A perſon of an ordinary ſize may walk upright in it; and there are holes left at certain diſtances, both for the admiſſion of freſh air, and the conveniency of cleanſing it when neceſſary.

Over the fountains that ſupplied this aqueduct with water, there were temples erected, of which there are ſtill ſome remains. One of them, which by its ornaments appears to have been of the Corinthian order, ends very beautifully in a dome, wherein are three niches, probably intended to receive ſtatues of water nymphs or other deities ſuppoſed by the antients to preside over fountains. The aqueduct however appears to be of much greater antiquity than the temple, having probably been a work of the Carthagenians; it being difficult to conceive how Carthage could well ſubſiſt without ſuch a convenience.

In the kingdom of Algiers, near a town called Sherſhell, lie the ruins of a large city, which, according to a tradition in that country, was deſtroyed by an earthquake. We may conceive no ſmall opinion of its former magnificence, from the fine pillars, capitals, capacious ciſterns, and beautiful moſaic pavements that are ſtill remaining. I was ſupplied with water brought by a large and ſumptuous aqueduct, little inferior to that of Carthage in the height and ſtrength of its arches; ſeveral fragments whereof, ſcattered amongſt the neighbouring mountains and vallies, continue to be ſo many inconteſtible proofs of the grandeur and beauty of the work. There are two other conduits ſtill ſubſiſting, which furniſhed Sherſhell with excellent water from the mountains, and may be conſidered as two ineſtimable legacies of the antients.

Among the ruins of Tlemſan or Tremeſen are found ſeveral ſhafts of pillars, and other fragments of Roman antiquities; and in the walls of an old moſque are a number of altars dedicated to the *Dii Manes*, but few legible inſcriptions. Moſt of the walls of Tlemſan have been moulded in frames, and conſiſt of a mortar made up of ſand, lime, and ſmall pebbles, which, by being well tempered and wrought together, is become equal to ſtone in ſtrength and ſolidity. The ſeveral ſtages and removes of theſe frames are ſtill diſcernible, ſome of them being a hundred yards long, and a fathom in height and thickneſs.

At a place now called Kaſbaite, an old Roman city, there are many fragments of ruins and antiquities, and amongſt the reſt there is part of the portico of a ſmall temple. A little to the ſouthward are ſeveral ſepulchral monuments moſt of which have been beautifully carved into a variety of figures in baſſo relievo, who are repreſented mourning, offering incenſe, or performing ſome office to the dead; and below the figures lie the inſcriptions.

All over a large knot of hills called Aureſs, lying to the ſouthward of Conſtantina, are ſpread a number of ruins, the moſt remarkable of which are thoſe of L'erba or Tezzoute, near three leagues in circumference. Here we find a great variety of antiquities; for beſides the magnificent remains of ſeveral of the city-gates, Dr. Shaw obſerved the ſeats and upper part of an amphitheatre; the frontiſpeace of a fine Ionic temple dedicated to Eſculapius; a large oblong chamber with a great gate on each ſide, intended perhaps for a triumphal arch; and a little beautiful mauſoleum; built in form of a dome, ſupported by Corinthian pillars. Theſe and other edifices of the like nature ſufficiently demonſtrate the once flouriſhing ſtate of this city, which appears to be the Lambeſa of the antients.

About Conſtantina, the antient Cirta, we meet with a great many remains of antiquity, particularly on a neck of land to the ſouth-weſt which is entirely covered with a ſeries of broken walls, ciſterns, and other ruins. Beſides theſe,

theſe, there are ſtill remaining, near the center of the city, a ſet of ciſterns about twenty in number, making an area of fifty yards ſquare, which our author ſuppoſes received the water brought to them by a now ruinous aqueduct, the fragments whereof demonſtrate the publick ſpirit of the people of Cirta in erecting a ſtructure that muſt have required ſuch an immenſe quantity of materials.

Upon the edge of a precipice to the northward are the remains of a ſtately edifice, at preſent occupied by the Turkiſh garriſon. Four baſes of pillars, ſeven feet in diameter, with their reſpective pedeſtals, are ſtill in their places, and ſeem to have belonged to the portico. They are of a black ſtone, little inferior to marble, probably hewn out of the range of rocks on which they are founded.

The ſide poſts of the principal gate of the city are of a reddiſh ſtone, as beautiful as marble, and very neatly moulded and pannelled. An altar of pure white marble makes part of a neighbouring wall, and on that ſide which is in view is carved in relievo a well ſhaped ſimpulum, a veſſel uſed by the antients in their ſacrifices. The gate towards the ſouth-eaſt is in the ſame faſhion and deſign, but much ſmaller.

The bridge was a maſter-piece in its kind, having had the gallery and columns of the arches adorned with corniſhes and feſtoons, ox heads, and garlands. The key ſtones of the arches

arches are alſo charged with caducei and other figures; and between the two principal arches there is a well-executed bas-relief, repreſenting a lady treading upon two elephants, which have their faces turned towards each other, and twiſt their trunks together. She has a large ſcollop-ſhell over her head, appears dreſſed in a cloſe-bodied garment like the riding habit of our times, and with her right hand raiſes up her petticoats, looking ſcornfully upon the city.

As to the city of Algiers itſelf, of whoſe antiquities the reader may perhaps expect an account, our author, whoſe obſervation nothing ſeems to have eſcaped, tells us there are few to be met with in that city, and little that merits the attention of the curious. There are indeed, upon the tower of the great moſque, ſome broken inſcriptions, but the letters, though ſufficiently large to be ſeen at a diſtance, are all ſo filled up with lime and white-waſh, that they cannot be particularly diſtinguiſhed.

The other parts of Barbary, beſides thoſe which Dr. Shaw had the opportunity of viewing, eſpecially near the ſea-coaſt, are not deſtitute of antiquities, though they are not to be met with in any great abundance. We have therefore little to add on this ſubject from the kingdoms of Fez and Morocco. It may not be improper, however, to mention a curioſity of the antient kind, a few miles diſtant from Tangier, where there is a vaſt hole like a coal pit, many fathoms deep, which leads into a great number of ſubteranean apartments, all lined with

with marble. Theſe, from the many ſtatues, urns, and old Punic inſcriptions that have been found in them, were undoubtedly repoſitories for the dead, like the catacombs in Italy and Egypt; which having been ſufficiently ſpoken of in their proper places, we need not enlarge upon thoſe of Barbary.

CHAP. III.

Of NEGROLAND *and* GUINEA.

SECT. I.

A general Account of Negroland *and* Guinea.

NEGROLAND is ſituated between 8 and 20 degrees of north latitude; and between 18 degrees weſt, and 28 eaſt longitude. It is bounded by a part of Guinea, called the kingdom of Benin on the ſouth; by Abyſſinia, and Nubia on the eaſt, by Zaara on the north; and by the Atlantic ocean on the weſt. Its greateſt length from eaſt to weſt is about 2000 miles; and its greateſt breadth, from north to ſouth, is about 600 miles.

Negroland is by moſt geographers divided into fifteen kingdoms, of which the kingdom of Gualata, of Guber or Gubur, of Zanfara, of Ayzade, of Cano, of Burno, and Gaoga lie on the north ſide of the river Niger, which runs from eaſt to weſt through the whole country, and from which it is ſuppoſed to have been antiently called Nigritia.

To the ſouth of the Niger is Guinea, containing the countries between the rivers Sanaga and Gambia, inhabited by the Jolloiffs, and Fulis or Pholeys; alſo the country of the Melli, of the Mundingoes of Gago, of Zegzeg, of Guanguara, and of Caſena.

On both ſides of the Niger eaſtward is the kingdom of Tombut; and inland between the Niger or Gambia, north of the mountains of Guinea, are the kingdoms of Bito, Temian, Dauma, Medra, Gachom, and Biafara.

The principal mountains of theſe countries, are a long ridge of mountains, which divides Negroland from Guinea, and reaches from the eaſtern to the weſtern ocean, the whole breadth of Africa; and the principal rivers are the Niger, which alſo runs from eaſt to weſt the whole length of Negroland, and riſes, it it is ſaid, from the ſame ſource as the river Nile. Other great rivers of theſe countries, are the Sanaga, and the Gambia.

We are much in the dark concerning the inland parts of theſe countries, as we have already obſerved of Africa in general; for moſt of the knowledge we have is gathered from the reports of the natives, who are but poorly qualified either for deſcriptions or hiſtory. In that vaſt tract which our geographers have aſſigned to Negroland, there are a great many kingdoms and nations of different people, who are ſubject to abſolute princes, but moſt of them tributary to the king of Tombut. In Guinea there are ſome ſovereign princes, whoſe dominions are extenſive, and whoſe government is arbitrary, being limited by no laws, or any other reſtraints: and there are many more to whom the Europeans have given the name of kings, whoſe dominions do not exceed the bounds of an ordinary pariſh, and whoſe revenues and power are very inconſiderable. But theſe are, in reality, all ſubject to ſome of the ſuperior monarchs, and no better than their vaſſals, being obliged to attend them in their wars, to quarter their ſoldiers, and to ſubmit to any kind of duties or impoſitions. The moſt powerful of theſe monarchs is the king of Whidah, who is very much feared and reverenced by his ſubjects. They appear in his preſence either kneeling or proſtrate on the ground; and they alſo proſtrate themſelves in the morning before the gate of his palace, kiſs the ground three times, clapping their hands together, and uſing expreſſions more like the adoration of ſome deity, than compliments paid to an earthly prince. He has viceroys, generals, governors, and other offi-

cers, as European princes have, ſome of whom are permitted to eat and drink in his preſence; but no perſon whatever is permitted to ſee his majeſty eat, or to know in what part of the palace he ſleeps; except his wives, of whom he has ſeldom leſs than a thouſand.

The coaſt of Guinea is very unwholſome, which ſeems chiefly owing to the heat of the day, and the coolneſs of the night, whereby contrary effects are produced in the body, eſpecially in thoſe who are not accuſtomed to bear more heat than cold, by haſtily throwing off their cloaths, and cooling too faſt. A ſecond cauſe is, that this country, particularly the Gold coaſt, abounds with high mountains, and in the valleys between them there ariſes every morning a thick, ſtinking, ſulphureous damp or miſt, which ſpreads itſelf in ſuch a manner, that it is almoſt impoſſible for Europeans to eſcape the infection while they are faſting, their bodies being more ſuſceptible of it than the natives. The great difference between the European air and this is ſo obſervable, that few come hither who are not at firſt ſeized with a ſickneſs, which carries off a great many, chiefly becauſe they are unprovided with what ſhould comfort and nouriſh them, having no recourſe but to corrupted medicines, and unſkilful phyſicians.

Notwithſtanding Guinea is ſo unhealthful for European conſtitutions, the natives have but few diſtempers. The ſmall-pox is the moſt fatal

tal to them of any, ſometimes ſweeping them away like a plague, as is the caſe in other warm climates. Another epidemical diſtemper is that of worms, which are found between the ſkin and the fleſh in all parts of their bodies, but chiefly in the legs, and give the patient very great torment till they are extracted. The manner in which they are drawn out is this: when the worm has broke through the tumour it occaſions, his head commonly appearing firſt (after they have drawn it out a little way) they faſten it to a ſtick, round which they wind a ſmall part of it every day till the whole be extracted, and the patient freed from his pain. If the worm happens to break, the torture is increaſed, the remaining part either rotting in the body, or breaking out at ſome other place. Some of theſe worms are ſaid to be an ell long, and others much longer.

Mr. Francis Moore, ſeveral years factor to the royal African company of England, has given us great lights into thoſe parts of Africa which border on the river Gambia, to the diſtance of five hundred miles from the ocean. The different kingdoms, ſays he, upon the banks of this river, are inhabited by ſeveral races of people, Mundingoes, Jolloiffs, Pholeys, Floops, and Portugueſe; which laſt having ſettled there about the year 1420, have cohabited with the Mundingoes till they are almoſt as black as they are; but they ſtill retain a ſort of baſtard Portugueſe language; and nothing vexes them more than to call them negroes,

that being a term which they uſe only for ſlaves. The Mundingoes are the moſt numerous of theſe nations.

On the north ſide of the Gambia lies the country of the Jolloiffs, which is very large, extending even to the river Senegal. Theſe people are much blacker and handſomer than the Mundingoes, not having the broad noſes and thick lips peculiar to the Mundingoes and Floops. In ſhort, none of the countries about this river can come up to the Jolloiffs for blackneſs of ſkin and beauty of features.

In every kingdom and country on each ſide of the river there are ſome Pholeys, a people of a tawny colour, much like the Arabs, who live in hords or clans, build towns, and yet are independent of the kings in whoſe territories they live; for if they are ill treated in one nation, they break up their towns, and remove to another. They have chiefs of their own, who rule with great moderation; and this form of government goes on eaſily, the people being of a good and quiet diſpoſition, and ſo well inſtructed in what is juſt and right, that a man who does ill is the abomination of all, and none will ſupport him againſt the chiefs, or endeavour to ſcreen him from juſtice. The natives here uſing very little land, the kings are willing enough to give the Pholeys leave to cultivate as much as they pleaſe; and accordingly, though ſtrangers, they are the greateſt planters in the country. They are very induſtrious and frugal,

frugal, and raiſe much more corn and cotton than they conſume, which they ſell at eaſy rates, and are very hoſpitable and kind to all; ſo that the natives reckon it a bleſſing to have a Pholey town in the neighbourhood. As their humanity extends to all, they are doubly kind to thoſe of their own race; inſomuch, that if they know of one of them being made a ſlave, all the Pholeys will redeem him. Having plenty of food, they not only ſupport the old, the blind, and the lame amongſt themſelves, but, as far as their ability goes, ſupply the wants of the Mundingoes, great numbers of whom they have maintained in times of famine. They are very ſeldom angry, and Mr. Moore never heard them abuſe one another; though this mildneſs does not proceed from want of courage, for they are as brave a people as any in Africa, and handle their arms with great dexterity. None of them, except here and there one, will drink any brandy, or any thing ſtronger than water and ſugar.

On the ſouth ſide of the river Gambia, and but a little way inland, are the people called Floops, who are in a manner wild. They border cloſe to the Mundingoes, and are bitter enemies to each other. Their country is of a vaſt extent, but they are under the government of no one chief; and yet ſuch an union ſubſiſts among them, that the Mundingoes with all their forces, though very numerous, cannot reduce them to ſubjection. They have the character of never forgiving, or at leaſt never ſuf-

fering an injury to go unrevenged; but then, to make amends, the leaſt good office done them is always repaid by a grateful acknowledgment.

Four months in the year, Mr. Moore informs us, are unhealthy, and very tedious to thoſe who are juſt come out of a colder climate; but the perpetual ſpring, where we commonly ſee ripe fruit and bloſſoms on the ſame tree, makes ſome amends for that inconvenience. The air is pleaſant and refreſhing, but it has ſomething ſo peculiar in it, that keys will ruſt which are kept in the pocket. The rainy ſeaſon commonly begins in the month of June, and continues till the latter end of September, or the beginning of October. The firſt and latter rains are generally the moſt violent; and it is obſervable, that the wind comes firſt, and blows exceſſive hard, for the ſpace of half an hour, or more, before the rain falls, ſo that a veſſel may ſuddenly be ſurprized and overſet; but however, it may be ſeen a good while before it comes, for it looks very diſmal and black, and the lightnings breaking out of theſe clouds as they move ſlowly towards you, it makes the appearance very awful; the lightning flaſhing ſo quick, as to make it continually light, and the thunder ſhaking the very ground. During the rains it is generally pretty cool, but when the ſhowers are over, the ſun breaks out with exceſſive heat, which induces ſome perſons to caſt off their cloaths, and lie down to ſleep; but perhaps before they are

awake comes another hurricane, and the heat ſtrikes into their bones, which gives them fits of illneſs, eſpecially the white men, for the natives are not ſo ſubject to catch cold. In the rainy ſeaſon the ſea-breezes ſeldom blow, but inſtead of them eaſterly winds right down the river, which in the months of November, December, January, and February, do commonly blow pretty freſh, particularly in the day-time. The moſt exceſſive heat is about the latter end of May, a fortnight or three weeks before the rainy ſeaſon begins.

The river Gambia, ſays Mr. Moore, is navigable for ſloops above two hundred leagues from its mouth, the tide flowing up to that diſtance from the ocean, which perhaps cannot be ſaid of any other river in the world. The ſides of it are for the moſt part flat and woody, for about a quarter of a mile inland, in ſome places not ſo much; and within that there are pleaſant open grounds, which they uſe for their rice, and in the dry ſeaſon it ſerves the cattle for paſture. Within land it is generally very woody, but near the towns there is always a large ſpace of ground cleared for corn. The ſoil is moſtly ſand, with ſome clay, and a great deal of rocky ground. Near the ſea and the lower part of the river, there are no hills to be ſeen; but higher up are ſome lofty mountains, from the tops of which the proſpects are very delightful.

SECT.

SECT. II.

A particular Account of the moſt curious natural Productions of Negroland *and* Guinea, *in the Animal, Vegetable, and Foſſil Kingdoms; and of other natural Objects of Curioſity.*

ANIMALS.

NEgroland and Guinea abound with elephants, lions, and many other wild beaſts already deſcribed. The river-horſe, crocodile, and alligator, are frequent in the river Gambia, together with a fiſh reſembling a ſmall alligator, called Guana, which is eaten by the inhabitants bordering upon the river, and is eſteemed a delicious fiſh.

In theſe parts of Africa, as in moſt hot ſandy countries, there are a great many ſnakes and other venomous reptiles. Mr. Moore tells us, that the natives are much afraid of the black ſnakes, which he himſelf has ſeen three yards long, and as big as the ſmall of his leg. He was alſo told of ſeveral other venomous ſnakes, particularly ſome with a comb upon their heads, which they poſitively affirm to crow like a cock. This perhaps is what we call the baſiliſk, or cockatrice, concerning which many ſtrange things have been reported, that are now generally looked upon as fabulous. There are likewiſe ſnakes with two heads growing out of one

neck; but thoſe our author ſays he never ſaw. He ſhot a green ſnake about two yards long, but in the thickeſt part not above three inches in circumference. This kind of ſnake, he was informed by the natives, is not at all venomous; but they have ſo many that are ſo, that they ſeldom go without a remedy about them, in caſe they ſhould be bit by any of theſe poiſonous animals.

At a town about a mile from Brucoe, Mr. Moore found a very large ſcorpion, being full twelve inches long. Theſe creatures are reckoned very venomous; and were a perſon to be ſtung by ſo large a one as this, our author believes it would be immediate death. He has known ſeveral people ſtung by ſmall ſcorpions, which wound is ſo extremely painful, that for at leaſt twelve hours the perſon ſtung cannot ſleep; but about that time the pain abates, and ſoon after is quite over. It is remarkable, that notwithſtanding the violence of the pain, the ſwelling is very little.

Guinea hens and partridges abound in theſe countries; and it is obſervable, that the latter have often two large ſpurs upon each leg. There are likewiſe plenty of wild geeſe and ducks, the former of which are larger than ours, and have long ſpurs growing out of the middle joint of the wings, with which they will beat a dog. The ducks are nearly as large as the geeſe, and the feathers of both are black and white.

About

About Joar a remarkable bird is found, about the ſize of a pigeon, having four wings. It never flies but in the evening, and may therefore be properly ranked among the bat kind. Another extraordinary bird, called gabbon by the Mundingoes, and goſsreal by the Portugueſe, is very frequent there. They meaſure upwards of ſix feet from the toes to the extremity of the breaſt, and are eſteemed delicious eating.

The muſquetoes, ſays our author, are the greateſt plague to a perſon of any vermin on the river. They are even worſe than ſome ſmall flies, and from their minuteneſs called ſand-flies, which are ſo little as hardly to be diſcerned. Theſe, if any wind be ſtirring, are not able to bite; but the muſquetoes mind neither wind nor any thing elſe, giving a perſon continual diſturbance, eſpecially in the night-time. They may be compared to our Engliſh gnats, but are much more troubleſome: when they bite, the part itches very much; and if you ſcratch it till it bleeds, you run the riſk of having a ſore; and when it is healed, the place always appears of a blackiſh colour.

The buggabuggs, as the natives call them, are a pernicious and deſtructive vermin whereever they get an entrance. Their way of travelling is to make a hollow pipe or tube of dirt, much like an arch of a vault, under which they march without being ſeen. They are a ſort of white ants, and are very expeditious at their

their work; for in twelve hours they will make their tube, and travel eight or nine yards to get to a cheſt, box, or barrel. Wherever they get, they make ſtrange havock, eſpecially in woollen cloaths. In ſhort, nothing comes amiſs to them, for they feed as hartily upon wood as any thing elſe; and what is moſt remarkable, ſays our author, is, that they eat the inſide only of a cheſt or table, ſo that when they have entirely deſtroyed it by eating the very heart and ſubſtance of the wood, it appears to the eye to be ſtill ſound. They cannot bear the ſun, which ſeems to kill them for a time; but after ſun-ſet they are obſerved to recover their ſtrength and vigour. People are obliged to watch theſe creatures very carefully, and to take meaſures to prevent their coming to their cheſts, which is done by putting them on ſtands with the legs of them well daubed with tar; and if the tar be not ſpread over anew at leaſt once a week, it is ten to one but theſe inſects pay them a viſit.

VEGETABLES.

THE Pholeys, who, of all the inhabitants of thoſe countries, apply themſelves moſt to huſbandry, plant-tobacco and cotton near their towns, which they fence in together. Beyond this incloſure are their corn-fields, of which they raiſe the four kinds uſual all over the countries bordering on the Gambia, namely,

ly, Indian corn or maize, rice, and the larger and leſſer Guinea corn. They have no wheat, barley, rye, otes, or any other European grain: but they have a kind of pulſe between the kidney bean and the pea, and yams and potatoes. The Indian corn they ſet in holes, three or four together, about four feet diſtant from each other, ſo that it grows like hops. It ſhoots up to the height of eight or ten feet, being a large cane, with the ears growing out of the ſides. The rice, which they eſteem their choiſeſt food, they ſet in rills, as we do peaſe; it requires wet grounds, and its ears are like oates. The larger Guinea corn is round, about the ſize of our ſmalleſt peaſe. This they ſow by hand, as we do wheat and barley; and it runs up to nine or ten feet high, though a ſmall reed, the grain growing in a large tuft at the top. The leſſer Guinea corn is ſown in the ſame manner, and ſhoots to the ſame height; but the reed is larger, on the top of which the corn grows in a head like a bulruſh. Theſe are all of the bread-kind that are cultivated on the river Gambia; and, indeed the natives make no bread, except the women who are accuſtomed to Europeans, but uſe the flour of the ſeveral grains to thicken their liquids. The Indian corn they uſe moſtly green, parching it in the ear upon coals, which gives it a taſte like green peaſe. They chiefly boil their rice as the Turks do; and they make flour of their corn by pounding it in wooden mortars.

The palm-tree in Negroland, perhaps a different ſpecies from any we have yet mentioned, Mr. Moore deſcribes to be a fine ſtreight tree, growing to a prodigious height, ſome of them to ſixty, ſeventy, or a hundred feet. From this tree the natives extract a ſort of whitiſh liquor like whey, called palm-wine, by making an inciſion at the top of the trunk, to which they apply a pipe made of leaves, through which the liquor runs into gourd bottles. This wine, ſays our author, is pleaſant to drink as ſoon as drawn, being exceedingly ſweet, but apt to purge very much. In a day or two it ferments, and grows hard and ſtrong, like rheniſh wine; at which time the natives drink it in abundance, it being then no ways unwholeſome. To ſee how nimbly the negroes climb up theſe trees is very ſurprizing, having nothing to aſſiſt them but a piece of bark made round like a hoop, with which they incloſe themſelves and the tree, and ſo ſetting their feet againſt the tree, and their backs againſt the hoop, they aſcend very ſwiftly: but ſometimes they fall down and loſe their lives, either by miſſing their footing, or the breaking of the hoop.

What they call the ciboa-tree, ſeems to be another ſpecies of the palm, growing like that, to a great heigh, and yielding a wine in the ſame manner, but not quite ſo ſweet as the former. The trunk of this tree as well as the palm, is very ſappy when young, but very tough when old; and the leaves that grow on

the top are of great ſervice in the covering of houſes.

There is alſo a ſpecies of palm growing in thoſe parts of Africa we are ſpeaking of, which yields an oil called palm-oil, or oil of Senegal, the name of a large river, ſuppoſed to be a branch of the Niger or Gambia. This oil, or rather ointment, which is of an orange colour and fragrant ſmell, is obtained from the pulp of the fruit, by adding to it a large quantity of boiling water, and ſtirring them in a kettle over the fire till they are intimately mixed. Then taking the kettle off the fire, they let the matter ſtand till its more ſolid parts ſubſide to the bottom; and having ſkimmed off the oil that floats on the ſurface, they repeat the operation by pouring on it more boiling water. The oil is of the conſiſtence of butter, and uſed as ſuch by the Africans, who alſo burn it when old. In Europe it is eſteemed a good remedy againſt cold humours, and is ſaid to ſtrengthen the nerves, give eaſe in pains of the gout, remove wearineſs, and relax contracted parts

Mr. Stibbs gives us a deſcription of a tree called *Pau de Sangue*, or *Blood-wood*, from a reddiſh gum which it yields, and which we ſuppoſe is the ſame that we uſually call gum Senegal, though Mr. Moore makes a diſtinction between them.

It is ſometimes whitiſh, ſometimes of a red colour, and imported to us in lumps, which are rough

rough externally, but clear and tranſparent within. It nearly reſembles gum arabic, and the whiteſt and pureſt parts of it are uſed inſtead of that gum by the London apothecaries.

At Seaca, a ſmall town on the Gambia, inhabited by the Portugueſe, Mr. Moore tells us there is a large cotton-tree, about thirty yards in circumference. It grows out in ſpurs, which make it ſeem ſo bulky, the hollows and riſings being taken into the meaſure, but excluſive of the ſpurs, the circumference of the body of the tree would not be above fifteen yards.

The banana-tree grows plentifully near the river we have ſo often mentioned, bearing a fruit ſix or ſeven inches long, covered, when ripe, with a yellow and tender ſkin. Its leaves are two yards long, and about twelve inches wide; and the fruit grows upon a ſtalk about ſix yards high, each ſtalk bearing only one ſingle cluſter or bunch, which perhaps conſiſts of forty or fifty bananas. When the bunch is gathered, they cut off the ſtalk, otherwiſe it would bear no more fruit. The pulp of the fruit is as ſoft as marmalade, and of a very pleaſant taſte; and it is ſaid to be very nouriſhing, to excite urine, and provoke to venery.

The fruit of the plantain-tree is not much unlike the banana either in taſte or ſhape, only it is ſomewhat longer.

Here are alſo Guavas, which reſemble our peaches, only the outſide is much rougher, and there is no ſtone within, but kernels leſs than thoſe of apples. This fruit is reckoned an excellent medicine againſt the flux.

We ſhall conclude this article with the Guinea pepper, from whence part of that country, where it grows plentifully, is called the grain coaſt. Abundance of it grows likewiſe in America, where it is much eſteemed; and it is now cultivated pretty commonly in France, eſpecially in Languedoc. The ſhrub that bears it flowers in our gardens in Auguſt, and produces red pods about the latter end of September and October, in which the pepper is incloſed; but the plant periſhes with the firſt froſt, ſo that it is ſown annually. The ſkins boiled, and uſed as a gargle, aſſwage the tooth-ach; and a cataplaſm made of the ſeeds mixed with honey, and applied to the throat, is good for a quinſey; otherwiſe it is not much uſed in medicine.

FOSSILS,

BOTH Negroland and Guinea have mines of iron, copper, ſilver and gould, though we are not certain whether many of them are wrought. Mr. Moore tells us, that the gold which the merchants bring down to the Euro-

ropean

pean traders on the river Gambia, is of a very good quality, and finer than the ſterling gold. They bring it in ſmall bars, thick in the middle, and turned round into rings, from ten to forty ſhillings value. Theſe merchants are blacks of the Mundingo race, and are called Joncoes. They are very unwilling to ſay much of the inland countries, and all our author could gather concerning the gold was, that it is not waſhed out of the ſand, but dug out of mines in the mountains, the neareſt of them at leaſt twenty days journey from Cower. In the country where the mines are, they ſay there are houſes built with ſtone, and covered with terrace, and that the ſhort cutlaſſes and knives which they bring down with them are made there, the ſteel whereof is excellent.

As to Guinea, it is ſuppoſed to contain more gold than any other part of the world, there being great quantities of it waſhed down from the mountains, and found in the rivers. By violent rains and torrents, pieces of rocks are ſometimes removed, and bits of this precious metal picked out of the clefts and cavities where it lay concealed; but much more is waſhed down in little particles, no bigger than ſand, into the rivers, which is called gold-duſt, as the former is called rock-gold. The European merchants and factors never go up into the country to purchaſe gold, but the trading negroes bring it to the forts and factories, and on board the European ſhips, great part of it coming two or three hundred miles or upwards. It is ſaid the

negro merchants mix copper, and other ingredients of leſs value, both with the rock-gold, and gold-duſt, in which cheat they are exquiſite proficients. The value of the gold brought from the Guinea coaſt, one year with another, by all the European nations that trade thither, is ſuppoſed to amount to three hundred thouſand pounds ſterling, or upwards; of which the Engliſh may import one third, the Dutch another, and the French, Danes, Portugueſe, and Pruſſians, the remainder.

In the rainy ſeaſons, after a wet night, the ſea-ſhore is covered with people, moſtly women, each having a couple of bowls made of calabaſhes, the largeſt of which they fill with ſuch earth and ſands as the floods have brought down from the mountains; and this they waſh with many waters, often turning the bowl round, till the earth and ſand be all waſhed away, except two or three ſpoonfuls at the bottom, which they carefully put into the other bowl; for the gold, if there be any, ſinks to the bottom by reaſon of its weight. Thus they continue waſhing the ſand till the ſmall bowl is pretty well filled with ſediment, which they carry home, and ſearch diligently. Sometimes they find as much gold as is worth a ſhilling, ſometimes ten, and very often none at all.

SECT.

SECT. III.

An Account of the moſt curious Arts, Manufactures, &c. of the Inhabitants of Negroland *and* Guinea.

THE Jolliffs are ſaid to make the fineſt ſort of cotton cloth, and that in large quantities. The pieces are generally twenty-ſeven yards long, but never above nine inches wide. After the cotton is cleanſed from the ſeeds, they ſpin it by hand, with the ſpindle and diſtaff, and weave it with a ſhutt e and loom, of very plain, coarſe workmanſhip. Some of their colours are very lively, and theſe are either blue or yellow; the firſt dyed with indigo, and the laſt with the bark of trees.

The negroes in general have few manual arts among them, which yet ſeems owing to idleneſs more than want of capacity. Thoſe of Guinea are chiefly employed in matting of chairs, making wooden or earthen cups, copper ointment-boxes, and arm-rings of gold, ſilver, or ivory, with ſome other toys. Though their tools are very indifferent, they can make ſabres and all ſorts of arms they want, guns only excepted, as well as whatever is required for their agriculture or domeſtic uſes. Their chief imple-

ments

ments are a kind of hard ſtone inſtead of an anvil, a pair of tongs, and a ſmall pair of bellows, with three or more pipes, which blow very ſtrong, and are an invention of their own. But their moſt curious manufacture is the gold and ſilver hatbands, which they make for the Dutch, the thread and contexture whereof are ſo fine, that they would not be eaſily imitated by our European artiſts.

The chief trade of Negroland and Guinea is in gold, ſlaves, elephants teeth, and bees-wax. Of the gold of theſe countries we have already ſpoken towards the beginning of this chapter; and the ſame merchants that bring it from the inland parts to the factories on the river Gambia, bring likewiſe elephants teeth, and in ſome years ſlaves to the amount of two thouſand, moſt of whom are priſoners taken in war.

Beſides the ſlaves brought down by the merchants, there are a great many purchaſed all along the river, perhaps a thouſand one year with another. Theſe are either taken in war, as the former, or people condemned for crimes, or elſe ſtolen, which is very frequent.

We are told that not only criminals and priſoners of war are ſold for ſlaves, but debtors alſo; and ſometimes the debtor's whole family and all his relations are included in the cruel ſentence. It is likewiſe ſaid, that men ſell even their wives and children when they have

offended

offended them, whilſt others leſſen their families under an apprehenſion they ſhall not be able to maintain them; and if a famine or great ſcarcity happens, they will ſell themſelves to one another for bread. One of the petty princes on the coaſt of Guinea is reported to have ſold, on ſome ſmall diſguſt, a ſcore of his wives to a captain of a ſhip at once; and in times of full peace nothing is more common than for the Negroes of one nation to ſteal thoſe of another, and ſell them to the Europeans. There have been inſtances alſo of children ſelling their fathers and mothers, when they have been weary of them, and wanted to enjoy their poſſeſſions; which has occaſioned a law in ſome countries, that children ſhall not inherit the goods or eſtates of their parents.

Another great article of trade in Negroland and Guinea is ivory, or elephants teeth, which are procured either by killing thoſe animals, or picking them up in the woods. It is a trade followed by all nations about the Gambia; for whoever kills an elephant, has the liberty of ſelling him and his teeth; but thoſe traded for in that river are generally brought from the inland parts of the country, and many of them by the merchants. As to thoſe found in the woods, whether they belong to elephants that had been dead many years, or whether theſe animals ſhed their teeth, as ſome have conjectured, Mr. Moore was not able to learn; but this is certain, that they find teeth without any ſkull or bones fixed to them, which makes the

the conjecture not improbable. The largeſt tooth our author ever ſaw weighed a hundred and thirty pounds. One part of Guinea is called the Tooth or Ivory Coaſt, from the great numbers of teeth found there, or brought thither from the inland parts to be ſold to the European merchants and factors.

The next branch of trade on the Gambia is bees-wax, which is capable of great improvement. The Mundingoes make bee-hives of ſtraw, of the ſame ſhape as ours in England; but they have a board at the bottom, with a hole in it for the bees to go in and out, and ſo are not placed on ſtands, but hung upon the boughs of trees. When they take the combs they ſmother the bees, and having ſqueezed out the honey, of which they make a ſort of wine, they boil up the wax with water, and preſs it through hair-cloths into holes made in the ground for that purpoſe. They make cakes of it from twenty to a hundred and twenty pounds weight, which the purchaſers try by boring through them, thoſe which are cleareſt from dirt being accounted the beſt.

As to the buildings of Negroland and Guinea, it cannot be expected that any thing very remarkable in that way ſhould be found in countries inhabited by people, who have ſcarce any knowledge of the arts, either liberal or mechanical. If there are any good ſtructures in thoſe parts of the world, they are owing to Europeans, who have ſettled there for the ſake of trade,

trade, and theſe buildings are chiefly forts and factories, in which we may ſuppoſe greater regard is had to ſtrength and convenience, than to magnificence and ornament. James's Fort is a handſome ſquare, ſtone ſtructure, regularly built with four baſtions. It ſtands on an iſland, in the middle of the river Gambia, where it is at leaſt ſeven miles wide, and the guns mounted on the baſtions command the river all round; beſides which there are two batteries under the walls of the fort, looking towards the ſea, on each of which are mounted four twenty-four pounders, and between theſe are nine ſmall guns mounted for ſalutes. In the fort there are very good apartments for the governor, chief merchants, factors, writers, &c. and underneath ſome of them are excellent ſtore-houſes. The ſoldiers, tradeſmen, and other ſervants lie out of the fort, in barracks built, as the fort is, with ſtone and mortar. This is the principal ſettlement the Royal African company have upon the river Gambia.

The fort of the greateſt conſequence belonging to the Engliſh on the coaſt of Guinea, is called Cape-Coaſt Caſtle, which was founded by the Portugueſe, who ſettled there about the year 1610. It ſtands on a large rock jutting out into the ſea, and forming a cape, which they called Cabo Corſo. In a few years time the Portugueſe were diſpoſſeſſed of it by the Dutch, who enlarged and beautified it; and it was afterwards taken by the Engliſh, who have added much to its ſtrength and grandeur. The

parade

parade, which is twenty feet perpendicular above the ſurface of the rock, is of a quadrangular form, and open on the eaſt ſide towards the ſea, which renders it cool, airy, and pleaſant, affording a delightful proſpect. On this ſide is a platform of thirteen pieces of heavy cannon; the other three ſides are encompaſſed with buildings, containing many beautiful and ſpacious apartments and offices, together with a large well-built chapel, the back part whereof joins to the wall of the caſtle, and the rock before it defends it from the violence of the ſea. The gardens belonging to this ſettlement are very pleaſant and large, being near eight miles in circumference; though they are not ſurrounded by any hedges or other fence, but all is called the garden, as far as there are any regular walks or plantations. They produce every thing that is natural to thoſe warm countries, as oranges, lemons, citrons, guavas, plantains, bananas, cocoa-nuts, tamarinds, pine-apples, &c. beſides ſeveral of the fruits and plants of Europe.

It would be tireſome to dwell any longer on this ſubject, which affords us nothing extraordinary; for as to the buildings of the natives, they are ſo many huts rather than houſes, the walls being of mud and binding clay, and the roof covered with long graſs or ciboa leaves, commonly called palmetto. They are generally fourteen or fifteen yards in circumference, and have very ſmall doors, which do not turn upon hinges, but are let into the wall. A

number of theſe huts built promiſcuouſly together forms their towns, which at a diſtance look like ſo many bee-hives. The Pholey towns indeed are built in a regular method, the houſes being ranged in ſtrait lines, and at proper diſtances from each other, to prevent the ſpreading of fire; and thus they have good ſtreets and paſſages, a thing which the Mundingoes do not regard. The Pholey's houſes are kept very ſweet, for they are a cleanly people, eſpecially the women. Their towns are ſurrounded with paliſadoes, within which they have plantations of cotton, and on the outſide of this fence they ſow their Indian corn. They have alſo a place near each town for their cattle, in the middle of which is built a ſort of ſtage about eight feet high from the ground, and eight or ten feet wide; which is aſcended by a ladder, and has a roof of thatch over it, but the ſides are all open. Here four or five men ſit all night, with their arms, to guard the cattle from the lions and other ravenous animals. Numbers of ſtakes are drove into the ground in rings round the ſtage, and every evening the cattle are brought out of the meadows, and tied each to a ſtake, with a ſtrong rope made of the barks of trees. They are ſo tame and accuſtomed to this confinement, that they come to it without any difficulty; and being milked in the evening, and again in the morning, they are turned looſe into their paſtures, where they are watched by herdſmen to prevent their getting into the corn, or running into the woods.

These Pholeys underſtand very well the breeding and managing of cattle, and are almoſt the only people high up the river of whom beaſts can be purchaſed.

CHAP. IV.

Of ABYSSINIA *or* ETHIOPIA.

SECT. I.

A general Account of Abyſſinia, *or* Ethiopia.

ABYSSINIA, or Ethiopia, comprehending Nubia and the coaſt of Abex, is ſituated between 20 and 42 degrees eaſt longitude, and between 6 and 25 degrees of north latitude. Its greateſt length from weſt to eaſt, is about 1320 miles, and its greateſt breadth from north to ſouth is about 1100 miles. Abyſſinia or Ethiopia in general is a very large diviſion of Africa, almoſt wholly ſituated in the Torrid Zone, having Egypt and the Deſart of Barca on the north, the Red Sea on the north-eaſt, Negroland and Guinea on the weſt, and on all other ſides the Ethiopic ocean. It is divided into two parts, the Upper and the Lower. The Upper is the north and eaſt part of Ethiopio in general, comprehending Nubia, Abyſſinia, the country

country of the Giaques or Galles, and the coaſt of Abex, Ajan, and Zanguebar, and was antiently called Ethiopia Interior. The Lower or Exterior is the ſouth and weſt parts of Ethiopia in general, containing the kingdoms of Monoemugi and Monomotapa, the great regions of Biafara, Loango, Congo, Angola, and in ſhort all the kingdoms and countries from the Equinoctial to the Cape of Good Hope.

The antient and celebrated kingdom or rather empire of Abyſſinia is ſometimes called Ethiopia Proper, and has been likewiſe much talked of under the title of the States of Preſter John, though, as ſome think, very abſurdly. This empire was formerly much more extenſive than it is at preſent, though even now it is a vaſt country, the ſeveral parts whereof are governed by proper viceroys, who have different titles. The extreme heat, to which the country is ſubject, is chiefly felt in the plains and valleys, whilſt the ridges of mountains, moſt of which are of a prodigious height, enjoy a delightful coolneſs; inſomuch that Father Tellez aſſures us, there are ſome parts of the country where the ſummers are leſs ſultry than in Portugal. This difference of heat and cold indeed between the high and low lands is attended with ſuch thunder and lightnings as are terrible both to man and beaſt, and often do a great deal of miſchief. The rains, when they deſcend, do not fall in drops, as with us, but ſometimes pour down with ſuch vehemence,

that they carry off trees, houſes, and even rocks before them, whilſt the rivers overflow and lay the country under water. The winds are ſometimes no leſs dreadful than the rains and thunder; and the country is ſubject to one in particular, which is rather a hurricane, and in their language is called ſengo, or ſerpent. This is often ſo violent as to overturn trees, houſes, and almoſt every thing in its way, but it in ſome meaſure makes amends for this miſchief, by clearing the air of the lower grounds, which would otherwiſe ſtagnate and prove infectious, as they find by experience.

The whole country is interſected, or rather covered with mountains, between which are ſuch dreadful precipices, as one cannot behold without horror; but ſome of the mountains have large plains at the top, covered with trees and other verdure, and afford ſprings of excellent cool water; and others are well cultivated, though the acceſs to them is exceeding difficult and hazardous. The mountains of Amhara are of a vaſt height, particularly that called Amba Geſhen, which is rocky, and every way inacceſſible but by two narrow paths cut into the rock; but the top of it produces all that is neceſſary for life or delight. According to Tellez, this mountain is ſhaped like a caſtle; the top of it is half a league wide, and the bottom about half a day's journey in circumference. Amongſt the mountains of Gojame we are told of a vaſt hollow rock, oppoſite to which ſtands another ſo ſituated, that a word only whiſpered

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on the top, is heard at a great diſtance, and the joint voices of ſeveral perſons ſpeaking at once, ſound as loud as the ſhout of a numerous army. The face of Nubia, as well as Abyſſinia, is very much overſpread with mountains.

The churches in the mountains of Abyſſinia, cut out of the ſolid rock, are mentioned by ſome writers as a great curioſity. It is ſaid they are ten in number, and that an exact proportion is obſerved in the gates, windows, pillars, arches, and all other parts, ſo that the whole appears elegant and regular; and it is affirmed they were all perfected within the ſpace of four and twenty years. It is to be obſerved however, that the rocks, out of which theſe churches are ſo curiouſly hewn, are of a ſoft nature; and it is not unlikely that ſome of them had part of their form beforehand, ſince there are many rocks in this country of different figures, ſo exact, that they ſeem to have been cut with a chiſſel. We are told, that the workmen employed in this curious performance were ſent for from Egypt.

As to Congo, Angola, Benguela, Monoemugi, Monomotapa, the coaſt of the Cafres, and all that part of Africa from the equinoctial to the Cape of Good Hope, we need only ſay in general, that the ſoil is various, and the country inhabited by various ſorts of people, with moſt of whom, except thoſe on the coaſts, we have very little acquaintance.

SECT. II.

A particular Account of the moſt curious natural Productions of Abyſſinia, *or* Ethiopia, *in the Animal, Vegetable, and Foſſil Kingdoms; and of other natural Objects of Curioſity.*

ANIMALS.

IN treating of the Indian iſlands, we mentioned an animal called oran outang, as approaching nearly to the human race in its manner of walking, ſhape, and ſagacity. This we apprehend is the ſame creature that ſome authors deſcribe under the name of the pigmy, or chimpanzee, and which is found in Angola, and other parts of Africa, a country abounding with apes, monkeys, and baboons, whereof the pigmy ſeems to be a very ſingular ſpecies. The oran outang indeed, or wild man, is repreſented as much taller than the pigmy; but the account that travellers give us of the former, are ſo imperfect and uncertain, that we ſuppoſe they are one and the ſame animal under different names.

That there is ſome ſuch creature in Africa, is ſcarce to be diſputed; for Mr. Moore tells us, that as he was walking about a quarter of a mile from one of the African company's factories, he found the foot of a beaſt, the carcaſs having been devoured, as he imagined, by a lion.

lion. It appeared to have been newly killed, and was covered with hair about an inch long; in ſhape reſembling the foot of a baboon, but as big as that of a man. Mr. Moore carried it home; and examining ſome of the natives about it, they told him it was the foot of what they called a wild man; that there are many of them in that country, but that they are ſeldom found; that they are as tall as a man, have breaſts like a woman, uſe a ſort of language, and walk upright like human creatures.

The pigmy, or chimpanzee, diſſected many years ago by Dr. Tyſon, was brought from Angola, and meaſured from the top of the head to the heel twenty-ſix inches. The thickeſt part of his body was ſixteen inches round, and the length of the arm was ſeventeen inches from the ſhoulder to the end of the fingers. The face of this creature is more like a man's, than the face of an ape or a monkey is, and its head is as big again as either of theirs, but the noſe is much alike in both.

In the year 1738, if we are rightly informed, Capten Flower brought over a female pigmy from Angola, which was two feet four inches high, had a face like a man, and was pretty fair, except on the chin, where a few ſtraggling hairs appeared. Its noſe was ſmall and flat like that of an ape, its mouth about two inches and a half wide, and its teeth ſhaped like human teeth, but neither very white nor ſound. The hair on its head was an inch or more in length

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and its back parts were pretty hairy, but on its breaſts and belly the hair was much thinner. Its feet were entirely bare on the inſide, as were alſo the hands both on the inſide and outſide.

This creature walked erect, was extremely fond of perſons it was uſed to, and even knew how to behave with good manners at the tea-table. It would fetch its little chair, and ſit down as naturally as any of the company; and if the tea was too hot, it would pour it into the ſaucer to cool; with abundance of ſuch ſeemingly rational actions, which were diverting and ſurpriſing to the ſpectators. Its food was chiefly potatoes, bread, milk, nuts, apples, and raw onions, which laſt it greedily devoured, ſhewing an averſion to all kinds of fleſh, except now and then a bit of rabbet or chicken. It lived in England about ſix months; and being opened after its death, it was found to have died of a confirmed jaundice.

The cameiopardal is an animal found in ſome parts of Ethiopia, being ſo called, as partaking both of the camel and the panther. Its legs are ſo long, that a man may ſtand upright under its belly, and its neck is long in proportion, in order to reach the ground to graze, ſo that when the creature walks with its neck erect, the head appears a great height above its body. It has a ſlender tail, two little horns, a ſmall mouth, but a very long tongue; and its two fore legs are longer than the hinder. The beaſt loves ſolitude, keeping continually

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in the woods; and if taken young, is exceeding tractable. Its fleſh is good meat; and its ſkin, which is ſpotted like a panther, is very valuable.

But perhaps there is not a more curious animal in Ethiopia than what the natives call zecora, or zebra, but the Europeans have given it the name of an aſs, though it reſembles that creature in nothing but the length of its ears, being well-ſhaped, lively, and of the ſize of an ordinary ſaddle-horſe. His hair is ſoft and ſleek, and along the ridge of his back runs a black ſtreak from his mane to his tail; and down each ſide, from his back to his belly, fall ſeveral ſtreaks of various colours, black, white, yellow, forming ſo many circles round his body; and his head, ears, legs, mane, and tail, are variegated in the ſame elegant manner. He is thought to exceed a horſe in ſwiftneſs; and ſuch of them as are taken alive are ſold at an exceſſive price; but there is no inſtance of their being broke for the ſaddle, or any other uſe: it is their beauty, and the difficulty of taking them, that makes them ſo much eſteemed. M. Thevenot ſaw one of theſe beautiful creatures at Cairo, which was brought by an Abyſſinian ambaſſador as a preſent for the grand ſignior.

Among the various ſpecies of the feathered race that are to be met with at the Cape, and in other parts of Africa, the flamingo is one of the moſt remarkable. It is a beautiful fowl, as large as a ſwan, having a head and neck as white

white as ſnow, but the upper part of the wings and moſt of the body is of a fine flame-colour, and the lower part of the wings is black. It is web-footed like a gooſe, and its legs are red and longer than thoſe of a heron. They get their food in ponds and rivers in the day-time, and at night retire to the hills. They are frequently killed by Europeans at the Cape, their fleſh being eſteemed very good.

There are many ſorts of fowls about the Cape to us entirely unknown, beſides others that are common in Europe. They have abundance of wild peacocks, and white ſhovelers as big as a hen, with a neck in two or three joints; alſo three ſorts of herons, ſome blue, others white, and others black. There are likewiſe oſtriches, ſeveral kinds of hawks, pheaſants, and partridges, white ravens, and white lapwings. The ſea near the Cape abounds with variety of fiſh, particularly crabs, lobſters, and oyſters of a large ſize; and the turtle or tortoiſe is alſo found on that coaſt. The rivers are frequented by Manatees or ſea-cows, which are low, thick, and ill-ſhaped, with very ſhort feet, and yet run ſwiftly. They have no hair but what grows about their noſtrils; and though they have large teeth, they are not miſchievous. They are very ſhy, and not eaſily wounded.

They have great variety of ſerpents about the Cape, ſome of them very large, particularly an aſh-coloured aſp, ſpeckled with red and yellow ſpots, having a broad head and neck, and

a fleſhy protuberance near the eyes about the bigneſs of a hazle-nut. Another is called the Eye-Serpent, from the light ſpots on his black ſkin, which appear like eyes; and there is a ſort called the Tree-Serpent, from winding itſelf round the branches of trees, which it ſo reſembles in colour, that men are frequently ſurpriſed by it, as taking it for part of the tree. But the moſt troubleſome kind are the Houſe-Serpents, ſo called becauſe they frequently creep into houſes, and ſometimes into the very beds; but unleſs a perſon happens to hurt them, they do not attempt to bite, and if they do, their bite is not mortal. This ſerpent is an inch and a half thick, and from an ell to a yard and a half in length.

But all that we have ſaid on this ſubject is not half ſo ſurpriſing as what we find atteſted in the Philoſophical Tranſactions, namely, that in the kingdom of Congo there are ſerpents twenty-five feet long, which will ſwallow a whole ſheep at once. They are killed as they lie ſtretching and baſking themſelves in the ſun; and after cutting off their heads and tails, and taking out their entrails, the negroes eat them, amd find them uſually exceeding fat. The ſame author reports, that the ants are ſo numerous and large in that country, that being one day ſick in bed, he was forced to order himſelf to be carried out of his room, for fear of being devoured by them; and that one may ſometimes find in the morning the ſkeletons of

cows

cows that have been eaten up in one night by thoſe inſects.

VEGETABLES.

ONE of the moſt remarkable vegetables in thoſe countries is a plant not unlike our nettle, which grows in Nubia, and produces a ſeed of ſuch a poiſonous and deſtructive quality, that a tenth part of a grain of it kills a man in a quarter of an hour, and a whole grain in an inſtant. This deadly product is made a conſiderable branch not only of the trade of the natives, but of the royal revenue; it being ſold by the retailer for a hundred ducats an ounce; beſides which, the buyer muſt pay the like ſum to the king, and take a ſolemn oath not to adminiſter any part of it within his dominions; and it is death for any private perſon to ſell it without the king's permiſſion.

There is a ſmall tree or ſhrub growing to the height of three or four feet, which bears a fruit reſembling Coriander ſeed: theſe berries, when ripe and dried in the ſun, ſhrink like Eaſt-India pepper, turn black and hard, and differ little from it in taſte, but is not ſo hot.

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In Angola grows a tree called by the natives Mandihoka, the leaves whereof are of a deep green, ſhaped like thoſe of an oak, and full of veins and prickles. The ſtem or body ſhoots up ten or twelve feet high, and then ſpreads out into many branches. When the tree is grown to its full maturity, they cut it down cloſe to the earth, and afterwards grub up the root, which they grind in a mill till it be as ſmall as meal; and this being dried over a furnace in copper pans, they make bread of it, which is little inferior in goodneſs to that of wheat or rye.

In the ſame country they have a tree called Likonde or Alikonde, which delights in a dry ſoil, and frequently grows to the thickneſs of eight, ten, or twelve fathoms in the body; but the root never goes above a foot under ground, ſo that they are eaſily blown down. Its fruit reſembles that of the Palm-tree, but is ſomewhat longer, having a white kernel within it; but the natives never eat it except in time of famine or great ſcarcity, it being reckoned a dangerous food, cauſing a ſickneſs which ſometimes proves mortal. Of the inner rind they make a ſort of cloth, and canoes or boats of the body of the tree.

The wine of the Cape has of late been much admired in Europe, though after the Dutch ſettled there it was a great while before they raiſed any conſiderable vineyards. At firſt they carried thither vine-ſtocks from the banks of

the Rhine, and from Perſia, which grew very well, and furniſhed them with grapes for eating, but they did not pretend to make any quantities of wine till a German taught them to take the prunings of their vines, and cut them into pieces about ſix inches long, and ſet them in fields ploughed for that purpoſe. They followed his directions, the prunings grew, ſending out ſhoots at every knot; and thus they were ſoon furniſhed with as many ſtocks as they had occaſion for, which they removed from theſe nurſeries, and planted them in other grounds in rows, at convenient diſtances from each other, the land being firſt prepared by the plough. This method has ſucceeded ſo well, that there is now ſcarce a cottage in all the Cape ſettlement but has its vineyard, which produces wine enough for the family, and ſome for ſale; though their vines often receive damage from the mildew or the locuſts: there is alſo a little black worm which is a greater enemy to them than either of the former; but they employ their ſlaves to pick off theſe worms every morning, whereby a great deal of miſchief is prevented. It often happens likewiſe, that their vines receive conſiderable damage from the ſouth-eaſt winds, which break off the branches loaded with the heavieſt cluſters; for which reaſon they do not let them run up higher than about three feet from the ground. Their vintage begins the latter end of February, and continues all the month of March; for though they have ſome grapes ripe in January, they only dry and eat them, obſerving that the wine

made

made of them will not keep. They have both red and white wines, but the greater plenty of white; which, if kept two years, has much the flavour of canary.

Beſides a vineyard, almoſt every houſe has its kitchen-garden, in which they have all the roots and herbs that grow in the gardens of Europe, from whence they are ſupplied with ſeeds from time to time; for it is obſerved that in a few years their plants degenerate, but while they do laſt they are larger and ſweeter than thoſe of Europe. The head of a cabbage, at its full growth, will ſometimes weigh twenty pounds, and that of a cauliflower as much; the ſeeds whereof are brought from Cyprus and Savoy.

FOSSILS.

THE mountains of Abyſſinia and Nubia contain inexhauſtible mines in their bowels, as appears by the vaſt quantities of gold duſt, which are found in the ſtreams that iſſue from them: but it does not appear whether the gold or ſilver mines of thoſe countries are wrought, the natives being naturally averſe to ſuch ſort of hard work, and perhaps thinking it would be folly to take pains to dig up treaſures which might tempt the Turks to invade

them. Inſtead of money, therefore, they make uſe of a kind of foſſil ſalt, to purchaſe from ſtrangers ſuch commodities as their country does not afford.

The mountains of Congo are likewiſe ſaid to abound with gold, though this is denied by ſome writers. It is allowed on all hands however, that there are mines of excellent copper, particularly in the provinces of Pembo and Sango; and in Bemba there are mines of ſilver and other metals.

In the province of Sundo there are mines of iron, which are wrought, the uſefulneſs of that metal in making arms, knives, inſtruments of agriculture, and divers other kinds of utenſils, being well known to the inhabitants. Quarries of good marble, and ſeveral ſorts of precious ſtones, are alſo found in theſe and many other parts of Africa.

But perhaps no part of Ethiopia yields greater penty of gold than the empire of Monomotapa, from whence the Portugueſe have given the ſovereign of that country, the title of the Golden Emperor. The natives dive to the bottom of their lakes and rivers, and bring up with them the mud and ſand, from which they afterwards ſeparate the precious metal.

But in the kingdom of Sofala, which is dependent on, and by ſome reckoned a part of the

the ſaid empire, the mines are ſo rich, that the inhabitants aſſert they yield annually above two millions of metigals, each metigal amounting to fourteen livres French money; that the ſhips from Zidem and other ports of Arabia carry off above two millions a year in time of peace; and that the Portugueſe governor of Moſambique, whoſe office laſts but three years, has three hundred thouſand crowns revenue in that time, beſides the ſoldiers pay, and a tribute paid to the king of Portugal. From this plenty of gold ſome have concluded Sofala to be the land of Ophir, to which Solomon ſent fleets from Ezion-geber, a port on the Red-Sea, which returned once in three years, bringing home gold and other commodities to an immenſe value: but this is mere conjecture, and indeed the moſt learned authors can go no farther in a matter of ſuch uncertainty.

In Abyſſinia, beſides a great number of ſalt pits which ſupply that country with much more than is neceſſary for home conſumption, there is on the confines of Dancala and Tigra, two adjacent kingdoms, a large plain of four days journey, one ſide whereof is incruſted all over with a pure white ſalt, and in ſuch quantity that ſome hundreds of camels, mules, and aſſes are conſtantly employed in carrying it to different parts of the neighbouring countries.

In Angola, there are mines of ſalt, from whence they dig it out in pieces above a yard long, and as clear as cryſtal. It is as white as

our beſt ſalt, and has ſuch a particuliar flavour, that a piece of it put into the pot gives both the liquor and meat a pleaſant ſeaſoning. In ſome parts of Ethiopia, there are whole mountains of ſulphur, beſides divers other foſſils, of which we have already given a ſufficient account in the courſe of this work.

SECT. III.

Remarkable Laws and Cuſtoms of the Hottentots.

THE Hottentots, who inhabit the ſouthern parts of Africa, are in many reſpects a very ſingular people; and are repreſented by ſome writers as the moſt ſtupid and irrational of all the human ſpecies. Mr. Maxwell acquaints us, that no arts are practiſed amongſt them, no ploughing nor ſowing, no going to ſea, not ſo much as in a boat; that they have no notion of a providence, a God, or a future ſtate; no tradition of the creation, or the flood, no prayers or ſacrifices; nor, in fine, the leaſt notion of any inviſible being, capable of doing them either good or harm; ſo that their ignorance, it is ſuppoſed, can hardly be parallelled. Mr. Kolben however, and ſome others, ſet the Hottentots in a different light. He ſays, that in agriculture, though they practiſe none themſelves, they excel the Europeans reſiding among them;

them; and in many other arts, of which he gives ſeveral inſtances, they diſcover great marks of capacity and diſcernment. He acknowledges it is a difficult matter to learn their notions concerning God and religion, or whether they have any at all; but after a long acquaintance with them, and many enquiries, he found that they believe a ſupreme being, who does no body any hurt; that he dwells far above the moon. They look upon the moon as an inferior deity, and aſſemble conſtantly to worſhip her at full and change, believing her to have the diſpoſal of the weather. They likewiſe worſhip an evil deity, whom they look upon as the father of all miſchief, who ſtirs up enemies againſt them, fruſtrates all their good deſigns, afflicts them and their cattle with diſeaſes, and ſets on wild beaſts to devour them. There is alſo a kind of inſects which they adore as a benign deity; and they pay a ſort of religious veneration to their departed ſaints and men of renown. They conſecrate woods, mountains, fields, and rivers to their memory; and when they paſs by any of theſe places, they ſtop to contemplate the virtues of the deceaſed, and to implore his protection for them and their cattle.

There is one part of the Hottentots character in which all writers agree; namely, that they are the filthieſt people in the world. This Mr. Kolben aſcribes to that general lazineſs which runs through all the nations of them, and in which they ſeem to place their whole earthly happineſs. And yet ſome authors have

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ſaid too much upon this point, and repreſented them as more uncleanly than they really are; for it has been aſſerted, that all the Hottentots without exception devour the entrails of beaſts, with their filth and excrements, and but half broiled; and that, whether ſound or rotten, they look upon them as the greateſt dainties. But Mr. Kolben, who took every opportunity to obſerve their manner of preparing and eating their victuals, always found, that when they had entrails to eat, they turned and ſtripped them of their filth, waſhed them in clean water, and then boiled them in the blood of the beaſt, if they had any; if not, they gave them a thorough broiling. They are ſo naſty indeed, when they do all this, as to make an European abhor the victuals: but it is to be obſerved, that their uſual food is roots, herbs, and fruits, and their drink milk and water. They are great lovers of tobacco and ſpirituous liquors.

What adds to the naſtineſs of the Hottentots, is the cuſtom obſerved from their infancy, of beſmearing themſelves all over from head to foot with butter or ſheep's fat mixed with ſoot, in order to make them look black, and to render their limbs pliable and ſupple. The meaner ſort of them are generally obliged to make uſe of butter or fat that is rank, which renders them offenſive to the noſe of an European, who may ſmell them at a conſiderable diſtance; but the better ſort beſmear themſelves with the freſheſt and choiceſt they can procure. Their hair is likewiſe

likewiſe ſo clotted with this greaſe and other filth, that it looks like a cap of black mortar.

Both ſexes are uſually clad with the ſkin of a ſheep, wild cat, or tyger, which they wear the year round, turning the woolly or hairy ſide inwards in winter, and outwards in ſummer. At night they lie upon theſe manties, and they are tied up and buried in them when they die. As they wear them moſtly open, being only tied about their necks with thongs, they appear naked down to the pudenda, which the men hang in a bag, and the women cover with a ſquare apron made of the ſkin of a ſheep or ſome wild beaſt. They tie to their necks a little greaſy bag, in which they carry a knife, a pipe and tobacco, or dacha, a kind of plant which they cut and ſmoke in lieu of it; and in this pouch they alſo carry a bit of wood, burnt at both ends, as a charm againſt witchcraft. The men only wear caps in cold and wet weather; but the women wear them all the year round both night and day. They are made of half-dried ſkins, and the crowns are raiſed a little ſpirally, whereas the men's caps ſit round and cloſe to their heads. The men generally wear three rings of ivory on their left arm, which ſerve not only for ornaments, but as a guard for the arm when they are engaged with an enemy. The women wear thongs of ſkins round their legs, the rings lying curiouſly one above another, ſometimes to the number of a hundred; and theſe ſo much

much reſemble the guts of ſheep or other animals, that they have been frequently miſtaken for ſuch by ſtrangers. Theſe ſerve for diſtinction of ſex, and for ornament; and they are alſo proviſions againſt an hour of hunger and ſcarcity, for if they can get no other food, they bruiſe them between two ſtones, and eat them with great eagerneſs and ſatisfaction. They go bare-footed, except when they travel, and then they have only a piece of ſkin faſtened about their feet.

The Hottentots, both men and women, are very fond of ornaments, particularly for the head, ſuch as ear-rings made of braſs-wire, braſs buttons, bits of looking-glaſs, &c. which they faſten to their hair, and admire them as much as diamonds are admired in Europe. Beads of braſs or glaſs are trinkets with which they are much delighted, wearing them in their necklaces, bracelets, and girdles; and the more of theſe they put on, the finer they reckon themſelves, and the more regard they expect from their neighbours. It is a cuſtom among the men to diſtinguiſh themſelves by the bladders of the wild beaſts they have killed, which they blow up and faſten to their hair, eſteeming them as trophies of their valour. The women paint themſelves with a red ſtone, making a ſpot over each eye, one upon the noſe, one upon each cheek, and one upon the chin, which they reckon a great addition to their beauty.

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The huts of the Hottentots are built with ſlender poles, bent like arches, and covered with mats made of bulruſhes dried in the ſun, and wrought ſo cloſe that the work is not to be penetrated by the rain. Their form is oval, the longeſt diameter being generally about fourteen feet, and the ſhorteſt about ten. Thoſe of the better ſort have two coverings, the one of mats, the other of ſkins, which not only keep out the rain, but the exceſſive heat. They have no light but what comes in at the entrance, which is an arch about three feet high, and two broad, on the top whereof is hung a ſkin, to be taken up or let down at pleaſure. Their furniture conſiſts of little more than their mantles, which ſerve them to lie on, ſome other ſkins of wild beaſts they have kil'ed or purchaſed, a pot to boil their meat in, one or two for drinking, ſome earthen veſſels for milk and butter, their bows and arrows and other arms, and perhaps ſome other trifling utenſils.

A number of theſe huts, ranged in a circle, with an open area in the middle, makes one of their kraals or villages, each of which has a court for the adminiſtration of juſtice. This court conſiſts of the captain and the head of each family, who try and determine by a majority of voices both civil and criminal cauſes. Murder, adultery, and robbery, they puniſh with death; and if the offender is convicted, he is executed on the ſpot, the captain giving him the firſt blow with his truncheon, and the reſt of the judges following the example till they

they have beaten him to death; which done, he is wrapped up in his mantle, and buried. The family of the criminal, however, ſuffers nothing either in privilege or property, nor are they reproached with the memory of his crime, but treated with the ſame reſpect and diſtinction as if no ſuch misfortune had happened.

Each village has its phyſician, and ſometimes two, who are choſen by the inhabitants, and do their duty without fee or reward, the honour of the employment being thought a ſufficient recompence for the trouble. The Hottentots put great truſt in the abilities of theſe doctors, taking their medicines, and ſubmitting to their operations, with the utmoſt readineſs; and indeed their practice is attended with wonderful ſucceſs: but they are not every day called to it, the Hottentots being a ſtout hearty people, rarely troubled with diſtempers. If a patient dies under their hands, they always aſſert that their remedies have been rendered ineffectual by witchcraft, and this the people always believe.

There is another officer, called Suri, or maſter, who, like the phyſician, is elected by the people, and performs his office without revenue or perquiſite. M. Kolben calls him the prieſt, as having the ordering of the marriage and funeral ceremonies, and of all that relates to their offerings and worſhip. He is the operator in the cuſtom that prevails among the Hottentots,

tots, of depriving the males of one teſticle, at the age of twelve years or thereabouts; which he does with a great deal of ſkill and dexterity, and alſo dreſſes and ſews up the wound, after having crammed it with the fineſt fat. In theſe things lies the whole myſtery of his function.

Every Hottentot nation has a chief, whoſe office is to command the army, and preſide in their councils; and without his conſent they neither make peace nor war. In council, which conſiſts of the captains of the ſeveral kraals, he ſits in the middle, and the captains round him in a circle; and ſince the eſtabliſhment of the Dutch at the Cape, he is diſtinguiſhed by a braſs crown, which he wears at the head of the army, in council, and on every ſolemn occaſion. This ornament the Dutch made a preſent of to the chief of every nation in alliance with them; wherea antiently they were only diſtinguiſhed by the ſuperior beauty of their apparel. The chief has nothing allowed him by the public, either for the reward of his labours or the ſupport of his dignity; but his perſon is always held in great veneration. Under him, in time of war, the captains command the troops furniſhed by their reſpective kraals; and they are diſtinguiſhed by a cane with a braſs head, which is alſo preſented them by the Dutch.

An unnatural cuſtom prevails among the Hottentots, that when a woman bears twins, if they are both girls, ſhe expoſes one and

nurſes the other; and if ſhe have a boy and girl, the boy is brought up, and the girl expoſed; but if they have two boys at a birth, they preſerve both, and make great feaſting and merriment on that occaſion. The child to be expoſed is either ſhut up in ſome cave, left in ſome thicket, or tied to a tree, where it is either ſtarved to death, or devoured by wild beaſts: And the pretence for this barbarous cuſtom is either poverty, or that the woman has not milk enough for both the children.

To conclude this account of the Hottentots, we ſhall only add another of their cuſtoms, equally cruel with the former, namely, that of expoſing their aged parents. When a father of a family is become quite ſuperannuated and uſeleſs, he is obliged, it ſeems, to reſign his ſtock of cattle, and whatever elſe he has in the world, to his eldeſt ſon, or to his next male heir: which done, the heir erects a tent or hut, in ſome unfrequented place, a good diſtance from the kraal he belongs to; and having aſſembled the men of the kraal, he acquaints them with the weak condition of the old man, deſiring their conſent to expoſe him in the diſtant hut built for that purpoſe, which they ſeldom or never refuſe. A day being accordingly appointed to convey the poor creature to his laſt abode, the heir kills an ox and two or three ſheep, and invites the whole kraal to feaſt and be merry with him; and when the entertainment is over, the old man is laid upon an ox, and carried to the hut,

hut, accompanied by moſt of his neighbours, where they ſhut him up, and leave him to periſh. In the ſame manner they deal with a ſuperannuated mother or female relation; and the reaſon they aſſign for this ſhocking cuſtom is, that it would be more barbarous to ſuffer an old creature to languiſh out a miſerable life, and be many years a dying, than to bring their miſery to a ſpeedy concluſion; and that it is out of extreme tenderneſs they put an end to the lives of the poor wretches in the manner above related.

CHAP. V.

Of the AFRICAN ISLANDS.

SECT. I.

A general Account of the African Iſlands.

THE principal iſlands of Africa, are Madagaſcar, the iſland of Bourbon, the iſland of prince Maurice, the iſlands of Comorro, and Zocotara, all which lie to the eaſtward of the continent, in the Indian ocean. On the ſouth-weſt, lie the iſlands of St. Helena, Aſcenſion, St. Mathew, Annobon, St. Thomas, and Princes iſland; and on the north-weſt lie the Cape Verde

iſlands, the Canaries, the Madeiras, and the Azores, though theſe laſt ſeem more properly to belong to Europe; and ſome geographers place them among the iſlands of America. Madagaſcar is one of the largeſt iſlands in the world, hitherto known; being about 800 miles in length, and in ſome parts above 200 in breadth. At a diſtance from the ſea, the country is full of high and ſteep mountains: but it abounds nevertheleſs with ſpacious plains, extraordinary good paſtures, rivers, and lakes, ſprings of excellent water, and woods that wear a perpetual verdure. The iſle of Bourbon belongs to the French, where they have three conſiderable towns. It is a fine fruitful iſland, and is the place where the French Eaſt India ſhips uſually put in for refreſhments.

The Mauritius, or prince Maurice's iſland, is poſſed by the Dutch, who found it uninhabited, but have now a fort and gariſon there, and have ſtocked the country with cattle and poultry. Here the Hollanders touch in their paſſage from the cape to Batavia.

The other iſlands on the eaſt of Africa are not very remarkable; nor are thoſe of the ſouth-weſt, except St. Helena, which belongs to our Eaſt India company, and is well fortified at the landing places, it being of great benefit to their ſhips, which uſually call there for refreſhment, both in their paſſage to India, and their return to Europe. This iſland on every ſide appears to be a hard barren rock, but on the top is covered with

with a fine earth twelve or eighteen inches deep, which produces plenty of graſs, herbs, roots, &c. and is very proper for wheat and other grain, but their corn is moſtly devoured by rats and other vermin before it comes to maturity. The country, beyond the aſcent of the rock, is prettily diverſified with riſing hills and vallies, adorned with plantatians of fruit trees and kitchen-gardens, amongſt which the houſes of the inhabitants are interſperſed. Their vineyards of late years have been conſiderably improved, ſome French refugees having ſettled in the iſland, who are ſkilled in that branch of huſbandry. They have plenty of black cattle, hogs, goats, turkeys, and all ſorts of poultry; and they are not only bleſſed with the neceſſaries of life, but with a continued ſtate of health to enjoy them, the air being uſually ſerene and clear, the iſland frequently refreſhed with cooling ſhowers and the ſea breezes, and themſelves almoſt conſtantly employed in the wholeſome exerciſes of agriculture and gardening.

The other iſlands on the weſtern ſide of Africa are not very conſiderable, till we come to thoſe of Cape Verde, which belong to the Portugueſe. The principal of them is St. Jago, where our Eaſt India ſhips outward bound are often ſupplied with water and freſh proviſions, the iſland abounding with hogs, goats, and poultry. From ſome of theſe iſlands, particularly Mayo, the Engliſh export great quantities of ſalt to America.

The Canary iſlands, which are ſubject to the crown of Spain, are chiefly famous for their excellent wines; and the ſame may be ſaid of the Madeiras; which belong to the Portugueſe.

Several of the Azores, which likewiſe belong to Portugal, are very fertile, pleaſant, and healthy, and have an excellent breed of cattle; but they are much ſubject to earthquakes and fiery eruptions.

Thus much may ſuffice for a general account of the African iſlands; but they afford us ſome natural curioſities, which require a more particular deſcription; and firſt,

Teneriffe, one of the Canary iſlands, is famous for its lofty mountain called the Pike or Peak, which riſes like a ſugar-loaf in the middle of the iſland, and may be ſeen at ſea in clear weather at an hundred and twenty miles diſtance. Some authors make the height of this mountain fifteen miles, and others three or four times that number, computing undoubtedly the winding aſcent; but Varenius ſays, it is four miles five furlongs perpendicular, and Raimondus reckons it three miles only. Which of theſe accounts is neareſt the truth, we cannot determine; but perhaps it is that of Varenius. We may ſafely venture to ſay that the Pike is one of the higheſt mountains in the world; but the beſt account of it is that given by ſeveral Engliſh merchants and others, who

had the curioſity to climb to the top of it, which we find in the hiſtory of the Royal Society of London, publiſhed by Dr. Sprat, biſhop of Rocheſter; whereof the following is an extract.

They ſet out from Oratavia, a ſea-port on the weſt ſide of the iſland, and paſſed over ſeveral bare mountains and ſandy places, till they came to the foot of the Pike, where lies a vaſt number of huge ſtones, that ſeem to have fallen down from above. After they had aſcended about a mile on horſeback, they were obliged to alight and climb the hill on foot; and having traverſed a ſteep black rock about a mile higher, they found the top of it as flat as a pavement. Her the air was very cold after ſun ſet, and they were orced to keep great fires all night. The nexte morning they proceeded to that part of the mountain called the ſugar-loaf, which being ſteep, and the ſoil a deep white ſand, it was very difficult travelling, though they were provided with ſhoes that had ſoles a finger broader than the upper-leather, to facilitate the paſſage. When they came near the top of the Pike, they found a ſtrong wind, and a continual breathing of a hot ſulphureous vapour iſſued from the hill, which ſchorched their faces and made them ſore. On the top there was a large baſon or pit, ſhaped like an inverted cone, which was of conſiderable depth, and about a muſket-ſhot over. The inſide of this cavity, or cauldron, as it is called, is covered with ſmall looſe ſtones mixed with ſand and ſulphur, from whence iſſued a hot ſuffocating ſteam; and the footing being

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ing ſo bad, they did not deſcend into the pit above four or five yards, though ſome have ventured to the bottom. The brim of this pit, on which they ſtood,. was not above a yard broad; and from hence they could clearly ſee the Grand Canary, Palma, Gomera, and even Ferro, which is twenty leagues diſtant. As ſoon as the ſun appears, the ſhadow of the Pike ſeems to cover not only this and the Great Canary iſland, but even the ſea to the very horizon, where it looks as if, being limited, it turned up into the air.

The ſame gentlemen relate, that there was a great deal of ſnow and ice about two thirds of the way up, but at the top there was none at all; which doubtleſs is owing to the hot ſteam proceeding from the caldron and the upper parts of the mountain. They mention a remarkable cave, ten yards deep and fifteen broad, in ſhape like an oven or cupola, with a hole at top, near eight yards over, through which their ſervants let them down by a rope till they came to a bank of ſnow. At the bottom of the cave there is a round well of water, exactly underneath the opening above, the ſurface whereof is about a yard lower than the ſnow, and its depth about ſix fathoms. This is not ſuppoſed to be a ſpring, but only ſnow blown in and diſſolved, or water that drops from the rocks, and is there collected. About the ſides and roof of this grotto there were icicles hanging down to the ſnow.

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They met with no trees or ſhrubs in their paſſage but pines, and among the white ſands a buſhy plant like broom.

A phyſician, who lived upon the iſland of Teneriffe twenty years, gives it as his opinion, that the whole iſland being impregnated with brimſtone, did formerly take fire, by the violence of which great part of it was blown up, there appearing about the iſland ſeveral mountains of huge calcined ſtones, that muſt have had their origin from ſuch ſubterraneous commotions. He farther ſuppoſes, that the greateſt quantity of ſulphur lying about the centre of the iſland, the ſhock was there the moſt violent, and occaſioned the riſing of the Pike to its preſent prodigious height; and this appears from the vaſt number of calcined rocks that lie at the bottom of it for three or four miles round. From the Pike to the ſouth-weſt, almoſt as far as the ſhore, are ſtill to be ſeen the tracks of the rivers of brimſtone and melted ore which ran that way, and have ſo ruined the ſoil where they flowed, that broom is now its only production.

In the year 1704, there happened a moſt dreadful earthquake in the iſland of Teneriffe, which began the 24th of December, and increaſed till the 31ſt, when the earth opened, and two volcano's were formed, which caſt up ſo many burning ſtones as made two conſiderable mountains; and the combuſtible matter thrown up by theſe new volcanos kindled above fifty

fifty fires in the neighbouring places. On the 5th of January the air was darkened with aſhes and ſmoke, the terror increaſed, and towards the evening the country was all in a flame for above a league in extent. This was the effect of another volcano, which had broke out towards Oratavia, with at leaſt thirty mouths within the circumference of a quarter of a league. In a word, whole towns were ſwallowed up or overturned, many thouſands of people loſt their lives, and the torrents of ſulphur and metallic matter thrown out by theſe volcanos converted a great part of a fruitful country into a barren deſart.

SECT. II.

A particular Account of the moſt curious natural Productions of the African Iſlands, *in the Animal, Vegetable, and Foſſil Kingdoms; and of other natural Objects of Curioſity.*

ANIMALS, VEGETABLES *and* FOSSILS.

IT does not appear, that there are many animals, natives of the African iſlands, which as different from thoſe already deſcribed, merit particular mention, on account of any curious

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or diſtinguiſhing characters or other peculiarities. With reſpect to the vegetable productions of thoſe iſlands, one of the moſt remarkable is Ebony, which though not peculiar to Madagaſcar, yet grows very plentifully in that iſland, and is a very fine wood, uſed in Moſaic and inlaid works, toys, &c. being very hard and heavy, and ſuſceptible of a beautiful poliſh. There are divers kinds of ebony, black, red, and green, all of them the product of Madagaſcar, though Maurice iſland, the iſle of Bourbon, and ſome of the American iſlands, furniſh part of the ebonies uſed in Europe. Authors and travellers give a very different account of the tree that yields the black ebony, but the moſt authentic is that of M. Flacourt, who reſided many years in Madagaſcar, as governor of the iſland. He aſſures us it grows very high and thick, has a black bark, and its leaves are of a deep green colour reſembling thoſe of our myrtle. Tavernier ſays, the iſlanders bury their trees when cut down, to make them the blacker. Ebony is much leſs uſed amongſt us than anciently, ſince the diſcovery of ſo many ways of giving other hard woods a black colour.

There is a large tree growing in Madagaſcar in great abundance, from whoſe trunk diſtils a reſinous gum called Tacamahaca, of which there are two ſorts, the one oozing from the tree ſpontaneouſly, the other by making inciſions. It is not unlike our poplar tree, only bigger and taller; its leaves are ſmall and green,

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its fruit red, about the ſize of a walnut, exceedingly reſinous, and containing a ſtone like our peaches.

In the Cape Verd iſlands there grows a remarkable fruit, called by the Engliſh, the cuſtard-apple, which is as big as a pomegranate, and much of the ſame colour. Its outſide ſhell or rind is beſet round with ſmall regular knobs or riſings, and the inſide is full of a white ſoft pulp, ſweet and very pleaſant, much reſembling a cuſtard both in colour and taſte; and in the middle there are a few ſmall black ſtones or kernels. The tree that bears this fruit has long ſlender branches, at the extremity whereof the apples grow; but a large tree ſeldom produces above twenty or thirty.

Among the curious foſſils of the African iſlands, we ſhall venture to place that fragrant drug called ambergriſe, though it be a ſubſtance whoſe nature and origin has been as differently gueſſed at, as any thing in natural hiſtory. A multitude of authors have had their favourite ſyſtems about it; but it has at laſt been found by chimical experiments to be a bitumen, iſſuing out of the earth, at firſt of a liquid, or, at leaſt of a viſcid conſiſtence, but afterwards condenſed and hardened by the ſun and wind. Great quantities of it are found thrown up by the ſea on the coaſt of Madagaſcar, and ſome other African iſlands, as well as on the continent. The ſeas about ſeveral of the Indian iſlands abound with it; and it is ſaid

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to be met with ſometimes on the northern coaſts of Great-Britain and Ireland.

This valuable bitumen is of a looſe texture, remarkably light, of a rugged unequal ſurface, ſoft and fatty like ſuet or tallow to the touch, of a high perfumed ſmell, and extremely various in ſhape and ſize. It is found in maſſes from an ounce in weight to thirty or forty pounds, and even much larger; but ſuch pieces are very rare, its moſt uſual ſtandard being from four to ten ounces. Its natural colour, when moſt pure and perfect, is a pale grey; but the whitiſh particles are ſometimes apt to waſh off, and leave the black ones alone, which are of a firmer ſtructure and leſs ſcented. This has occaſioned ambergriſe to be diſtinguiſhed into two kinds, aſh-coloured and black, of which the latter is much leſs valuable.

Of AMERICA *in general.*

AMERICA is a quarter of the world, which, though the largeſt, and, in ſome reſpects, the richeſt of all the four, is placed the laſt of the four by geographers, becauſe it was the laſt diſcovered, and probably the laſt peopled: for whatever ſome authors may have imagined, that this vaſt continent, or at leaſt ſome tracts of it, was known to the wiſe king Solomon, it is plain that neither any of the ſacred books, nor of the antient hiſtorians, have made the leaſt mention of this part of the globe. Neither is it likely, that if in Solomon's time a large tract of it had been diſcovered, and a profitable traffic ſettled there, as ſome pretend, it ſhould have ended and died with that monarch. Nor do we ſee any reaſon to fall in with that chimerical ſuppoſition, that America was known to the antients; for ſo large and rich a continent, once found out, could never be loſt again, without ſuppoſing an end of the world, and a new race of people, quite ignorant of the diſcoveries of their anceſtors. We may therefore ſafely conclude, with the far greateſt part of authors, that this vaſt continent, this New World, as it is called, continued unknown from the creation to the year of our Lord 1492, when it was diſcovered by Chriſtopher Columbus, of whoſe enterpriſe we have already given ſome account.

By inſpecting a map of America, it appears that the north and ſouth parts of that vaſt continent

tinent are joined together by a narrow neck of land, called the Iſthmus of Darien or Panama, which is about ſixty miles over from ſea to ſea, between Panama and Porto Bello: ſo that when we divide America into north and ſouth, it muſt not be underſtood that the Equator makes this diviſion, but the ſaid Iſthmus; for what is denominated South America, extends at leaſt twelve degrees to the northward of the Equator.

The whole length of America, from the moſt northern part of it yet diſcovered to the Streights of Magellan on the ſouth, is about eight thouſand miles in a direct line; but as to its breadth it is quite irregular, being in ſome places about three thouſand ſix hundred miles, and not above ſixty or ſeventy in the narrow Iſthumus abovementioned. It is not known whether it joins to Europe or Aſia on the north, but on the eaſt it is bounded by the Atlantic Ocean, which ſeparates it from Europe and Africa; on the weſt by the South Sea or Pacific Ocean, which parts it from Aſia; and on the ſouth by the Streights of Magellan, which ſeparate it from *Terra del Fuego*, on the ſouth part of which is Cape Horn, reckoned the utmoſt verge of South-America.

A country of ſuch vaſt extent, not only on each ſide of the Equator, but reaching ſo far beyond each of the Tropics, muſt of neceſſity be ſuppoſed to have as great a variety of ſoils as it has of climates: but upon the whole, if we except the moſt northern and ſouthern parts,

which are here, as every where elſe, naturally cold and barren, the reſt is an immenſe treaſury of the valuable productions of nature, being ſtored with moſt, if not all the plants, grains, fruits, trees, metals, minerals, &c. that are found in the other parts of the world, and many of them likewiſe in much greater perfection; beſides which, it has an almoſt infinite variety of others peculiar to itſelf, which will not grow, or at leaſt thrive, in any other country.

CHAP. I.

Of SOUTH AMERICA.

SECT. I.

A general Account of South America.

THE moſt general diviſion of South America is into 1. Braſil, the chief cities of which are St. Salvador, and St. Sebaſtian. 2. Paraguay, the chief city of which is Buenos Ayres. 3. Terra Magellanica. 4. Chili, the chief cities of which are St. Jago, and Imperial. 5. Peru, the chief cities of which are Quito, Payta, Lyma, and Potoſi. 6. The country of the Amazons. 7. Guiana; and 8. Terra Firma, the chief cities of which are Porto Bello, Panama, and Carthagena.

SECT.

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Hulett Sculp

The Mantiger.

SECT. II.

A particular Account of the moſt curious natural Productions of South America, *in the Animal, Vegetable, and Foſſil Kingdoms; of remarkable Mountains, Springs, and Rivers; and of other natural Objects of Curioſity.*

ANIMALS.

AMONG the remarkable animals found in South America may be reckoned the mantyger, a quadruped about the ſize of a maſtiff-dog, with a head fourteen inches long, and ſomewhat reſembling that of a horſe; the noſtrils are large, and the noſe depreſſed lower than the upper jaw. It has a large tuft of hair on the forehead, and under the chin; and the fore-feet reſemble human hands exactly, having long and thick fingers, and a thumb, the nails of which are flat: but thoſe of the hinder toes are not ſo. The fore part of the body, and the inſide of the arms and legs are almoſt bare of hair, but the outſide is covered with hair, which is of a motly brown and olive colour. It has a navel and paps on the breaſt; feeds chiefly on fruits, and will ſit and ſupport itſelf by a ſtick in one hand, while it drinks out of a cup held in the other. It has two long tuſks in the upper jaw, has no tail, and is a very fierce and laſcivious animal.

The Cuandu of Braſil, according to Dr. Tyſon, is a ſort of porcupine, deſcribed by Margrave and Nieuhoff, which has but four toes on the fore feet, and five on the hinder ones; ſo that, as Margrave obſerves, for want of what may be called the thumb, it is but ſlow in climbing trees; but has a way of twiſting its tail about a bough, and thereby frequently ſaves itſelf from falling.

The Tamandua, another animal of Braſil, has only four toes before, but five behind, and alſo makes uſe of his tail in climbing.

The Coati Mundi of Braſil is repreſented differently by different writers, but is uſually ſaid to have a ſnout about a foot long, ſmall eyes like a pig, round ears like a rat, and hands like thoſe of a monkey. Its hairs are ſhort, rough, and of a blackiſh colour on the back, the reſt of the body having a mixture of black and red. The animal is ranked by Dr. Tyſon among the number of thoſe he chuſes rather to call four-handed than four-footed, of which ſome have no thumb on the fore feet, and others none on the hinder feet. Of the former ſort he reckons the Vantrevan, as it was called by a perſon who ſhewed it in London, which is a beautiful creature, has a long tail, and is very briſk and nimble.

The Patto, or Sluggard, is likewiſe one of this kind of animals, having a head not unlike an ape's, and, as Margrave ſays, two teats on

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The Opossum

the breaſt; but it has only three claws on each foot, with very long nails, like the Tamandua. It has it name from the ſlowneſs of its motion, which, ſays Coetlogon, is like that of auxiliaries going to fight, for he ſcarce advances ten ſteps in a whole day. When he aſcends a tree, he does not leave it till he has devoured both the fruit and the leaves, and then comes down in good plight, but grows lean before he gets up another, if he does not periſh with hunger.

The Opoſſum, which is a native of Braſil and other parts of America, is a very remarkable animal, in ſhape and ſize like a badger, but of a lighter colour, and with a longer tail. What is moſt wonderful in this creature, is the bag or purſe in the ſkin of its belly, to which its young ones retire and hide themſelves in caſe of danger. In the male Opoſſum however this pouch is not diſcernible, only the ſkin in that place, according to Dr. Tyſon's obſervation, ſeemed to be looſer, ſo that he could thruſt it in with his fingers, and by turning it round form a ſort of bag, but which, on withdrawing his finger, returned to its former poſition; and for this reaſon the doctor leaves it as an uncertain point, to be determined by thoſe who live where theſe animals are bred, whether this part of the ſkin is capable of being formed upon occaſion into a pouch, and whether they ever obſerve the male Opoſſum to receive the young as the female does.

The

The Opoſſum being a carnivorous animal and particularly fond of birds, is endued by nature with a faculty of twiſting its tail about a ſmall branch of a tree, and thereby ſtretching itſelf out to rob a neſt, or obtain its deſired food: nay, by this means it may be ſaid to fly; for hanging thus by the tail, and ſwinging its body to and fro, it can fling itſelf into a neighbouring tree, where its tail is ſure to faſten on the firſt bough it meets with, if it otherwiſe miſſes its footing; and its hinder feet being made like hands, and furniſhed with a thumb, it thereby the more readily raiſes its body.

We come now to an animal of ſuch a magnitude and ſtrength, as, if not atteſted by authors of unqueſtionable veracity, we ſhould not have ventured to deſcribe or mention. This is the Cuntur or Condor of Peru, which Sir Hans Sloane, from the account of Captain Strong, commander of a South-Sea ſhip, has taken notice of in the Philoſophical Tranſactions. This is an animal of the feathered race, and of ſuch an amazing bigneſs, that the Captain's men, who ſhot one and meaſured it, found it was ſixteen feet from the extremity of one wing to the other. One of its feathers was two feet four inches long, the quill-part near ſix inches, its weight three drachms, and above ſeventeen grains, and was concave on one ſide, and convex on the other. The ſeamen ſhot it as it ſat on a clift by the ſea-ſide, and eat it, taking it for a ſpecies of turkey. They were told by the

the Spaniards that they were afraid of theſe birds, leſt they ſhould prey upon or injure their children.

To this account it ſeems proper to add the teſtimony of Acoſta and Garcilaſſo de la Vega, who ſay that the fowls corruptly called Condor by the Spaniards, meaſured fifteen or ſixteen feet from the end of one wing to the other; and that their beak is ſtrong enough to tear off the hide, or rip open the bowels of an ox. Two of them will attack a cow or bull, and devour him; and it has happened that one of them has aſſaulted and eaten boys of ten or twelve years of age. But it is obſerved, that nature, to temper and allay their fierceneſs, has denied them the talons which are given to the eagle, their feet being tipped with claws like an hen. They are black and white like a magpye. and on the fore part of their head have a comb, not pointed like that of a cock, but rather even, in the form of a razor.

In Braſil we find a great number of curious birds, particularly the Anhima, or unicorn-bird, ſo called becauſe it has a horn two or three inches long growing out of its forehead, but blunt and brittle, and therefore of no defence to the creature.

There is alſo the Toukan, of the bigneſs of a wood-pigeon, of a perfect jet black all over, except under the belly, where it is of a fine yellow, and round its neck is a ſmall circle of red.

red. The natives adorn themſelves with the feathers of this bird, on occaſion of feſtivals, dancing-matches, or other rejoicings. But what is moſt remarkable, if the account may be credited, is that the bird's bill is larger than its whole body, being about a ſpan long, yellow without and red within.

Another bird of Braſil is called the Cocoi, which is ſhaped much like our ſtorks, and has a moſt curious variety of colours on its feathers.

The Guara, which the Europeans call the ſea-curlew, is ſurprizing for its often changing its colour, being firſt black, then aſh-coloured, next white, afterwards ſcarlet, and laſtly crimſon, which grows deeper and richer the longer the bird lives.

Parrots, parroquets, and various birds of the ſame ſpecies, are there as common as we have pigeons; and though ſome of them are moſt beautifully feathered, they are in too great plenty to be eſteemed by the natives, except now and then to uſe their feathers as ornaments.

Of the eatable fowls they have turkeys very large and delicious; and the ſame may be ſaid of their other kinds of poultry, eſpecially a white ſort of hens, whoſe feathers they dye of a fine green, and mix with thoſe of other birds, which they wear about their heads and middle.

They

They have likewiſe plenty of ducks and ſuch-like water-fowl; but it is ſaid the Braſilians will not eat them, thinking them infectious: neither will they eat any kind of eggs, eſteeming them unwholſome, if not poiſonous; and are ſurpriſed to ſee the Europeans ſo fond of them, and eat them without injury.

The ſeveral ſpecies of ſheep met with in Peru, are worthy the notice of the curious, particularly thoſe called Llama's by the natives. Their heads are ſmall in proportion to their bodies, ſomewhat reſembling both that of a horſe and a ſheep, but the upper lip is cleft in the middle, like that of a hare, through which they can ſpit from them to the diſtance of ten paces; and this ſpittle, it is ſaid, if it falls on any one's fleſh, makes a reddiſh ſpot, which is followed by an intolerable itching. Their necks are long, bowing downwards like the camel's; which animal, except in the bunch on the back, they pretty much reſemble. Their height is from four feet to four feet and a half, and they generally carry a hundred weight, walking with their heads erect, looking grave and majeſtic, and with ſuch a regular pace that it is ſcarce to be altered by beating. Theſe ſheep eat but little, and ſeldom or never drink, ſo that they are very eaſily kept, grazing upon a ſhort herb like a ruſh, with which the mountains of that country are covered. It ſeems they are uſed by the Spaniards in the mines to carry ore to the mills; and when they are once acquainted with their ſtage, they want no guide

or driver. Above the foot they have a ſpur, which they make uſe of to hold by among the rocks, ſo that they are very ſure footed. Their wool has a ſtrong ſcent, and ſomewhat diſagreeable; it is long, white, grey, and fine.

The Vicunna's of Peru are ſhaped much like the Llama's, only they are ſmaller and nimbler, and their wool being extremely fine, is very much valued. Theſe creatures are ſometimes hunted in the following manner: many Indians get together to drive them into ſome narrow paſs, where they have made ropes faſt acroſs, three or four feet from the ground, on which are hung bits of wool and cloth. At the motion of theſe the animals are ſo frightened, that they dare not go any farther; ſo that they crowd together, and the hunters kill them with ſtones made faſt to the end of leather thongs. If any of thoſe creatures called guanaco's happen to be amongſt them, they leap over the cords, and the vicunna's follow them. The guanaco's are larger and more corpulent, and in ſome parts are called vicacha's.

Of the animals found on the coaſt of America, particularly Braſil, Terra Firma, and many of the neighbouring iſlands, we know of none more deſerving the attention of the curious than the turtle or tortoiſe. But it is to be obſerved there are two kinds of tortoiſes, the land and the ſea tortoiſe, and this latter again is of various kinds; but it is only one ſort,

ſort, called the Caret, or Caretta, which furniſhes that beautiful ſhell ſo much admired in Europe. This is otherwiſe called the Hawk's-bill Tortoiſe, whoſe ſhell is thick, and conſiſts of two parts, the one covering the back, the other the belly, and the two are joined together at the ſides by ſtrong ligaments, which yet allow of a little motion. In the fore part is an aperture for the head and fore legs, and behind for the hind legs and tail. We are told that the under ſhell alone is uſed, which they ſeparate from the upper by making a little fire underneath, and as ſoon as it is warm it is eaſily taken off in laminæ or leaves with the point of a knife, without killing the animal, which, it is ſaid, being turned to ſea again, acquires a new ſhell. Theſe leaves are thirteen in number, eight of them flat, and five a little bent; and four of the flat ones are ſometimes a foot long, and ſix or ſeven inches broad. The beſt tortoiſe-ſhell is thick, clear, tranſparent, and ſprinkled with brown and white; but when uſed in marquetry, and ſuch-like works, the workmen give it what colour they pleaſe, by laying coloured leaves underneath it.

Of the ſeveral kinds of tortoiſes only one of them is eatable, which is called the green tortoiſe, its fat being of a greeniſh colour. The method of taking them is to obſerve their tracks in the ſea-ſands, and the next night ſit up to watch, and turn them on their backs, for then they are quite helpleſs. Their blood is cold; and Mr. Smith informs us, that he has ſeen,

upon opening one of them, at leaſt two hundred eggs, exactly round, taken out of it, about forty of which were incloſed in whitiſh tough ſkins, with a ſubſtance like jelly round the yolk, and were ready to be laid all at one time. Rogers ſays, he ſaw at ſome iſlands in the South Sea, a turtle that had at leaſt eight hundred eggs in its belly, a hundred and fifty of which were ſkinned and ready for laying. The female turtles go aſhore to lay their eggs in the ſand, above high-water mark, where they leave them to be hatched by the warm beams of the ſun; and this is effected in eight and forty hours time, as our author was informed by thoſe who made it their buſineſs to fetch them from ſome uninhabited iſlands, where they are vaſtly plenty; and where they ſee, almoſt every day, great numbers of young ones, not broader than a ſhilling, newly hatched, haſtening down into the ſea. The ſame is aſſerted by Rogers above quoted; for as they are frequently diſturbed in inhabited places, they ſeldom go aſhore there; and it is obſerved that the hawk's bill turtles do not often come amongſt others.

The turtles being amphibious, they feed on graſs and weeds, as well in the water as on the land; but they uſually make their reſidence and find their aliment in certain meadows at the bottom of the ſea, where it is not many fathoms deep: and according to the accounts of navigators, when the ſea is calm and the weather ſerene, they may be ſeen creeping on this

this green carpet. After they have fed ſufficiently, they take their progreſs into the outlets of rivers for freſh water or air, and then return to their former ſtation. In the intermiſſion of their feeding they frequently float with their heads above the ſurface of the water, unleſs they are alarmed by any appearance of danger, in which caſe they ſuddenly plunge to the bottom; for the tortoiſe having the benefit of lungs, ſhe can diſtend herſelf by an influx of air, and be brought to an equilibrium with the water, like a frog; and like other amphibious creatures, ſhe is enabled to ſwim by the impulſe and retraction of her paws, though for the generality ſhe contents herſelf with creeping.

After the tortoiſe it is natural enough to mention the armadillo, an animal found in the Weſt Indies, and in Guinea, which has its back covered with a hard ſhell, that ſeems to be buckled to it like a coat of armour. Its tail is long like a rat's, and is alſo covered with a ſcaly ſhell. The whole creature is not much bigger than a little pig, which it reſembles in its ſnout, ears, legs, and feet. It has four toes before, and five behind.

Various kinds of monkeys are to be met with in the Andes and other parts of South America; ſome of which are ſaid to be merry, others melancholy; ſome nimble, and others heavy; ſome hairy, others almoſt naked; of themſelves timorous, but taking courage if a man ſeems to be afraid. There are likewiſe vaſt numbers of apes, ſomewhat different from

monkeys, with long tails, and of ſeveral colours, ſome black, ſome grey, &c. We are told ſtrange things of the nimbleneſs of theſe creatures, that they ſkip about the trees like birds, and ſometimes hang to a bough by the tail, and ſo ſwing themſelves where they pleaſe; and that when the leap is too great for one alone, they lay hold of each other's tails, and ſo ſwing till the lowermoſt, with the aſſiſtance of the reſt, gives a ſpring and lays hold of the bough, and ſo they all get over.

Of the like nature is the account we have of herds of ſwine among the mountains abovementioned, which have navels on their backs, and every herd has its leader, who is eaſily known, becauſe none of them preſume to go before him; and when this leader is killed, the herd may be ſafely attacked, for they diſperſe as a vanquiſhed army. It is alſo ſaid of theſe creatures, that ſome of them will rub themſelves againſt certain trees whoſe bloſſoms they are fond of, and ſo ſhake them off for the reſt to eat, who in their turn do the ſame for their companions.

But the moſt ſurpriſing relations travellers entertain us with, are concerning the multitude and monſtrous ſize of the ſerpents of Brazil. We are told of ſome that are thirty feet long or upwards, and as big about as a hogſhead, ſo that they can ſwallow at once a whole buck or a man, and eaſily take either of them by throwing their tails round them; and hence this

this frightful creature has obtained the name of the roebuck ſerpent. Nay, to carry the matter ſtill farther, we are likewiſe told of a water-ſnake in Braſil, near forty feet long, and every way proportionable, in whoſe body were found two wild boars he had ſwallowed.

Though theſe accounts may be exaggerated, it is certain that Braſil is remarkable for large ſerpents and other venomous creatures. There is one called ibaboka, which is between three and four yards long, and of a conſiderable thickneſs. Its colours are various, as black, white, red, green, &c. and its bite mortal, but the poiſon works the ſloweſt of any. On the other hand they have a little four-legged animal of ſo venomous a nature, that its ſting is abſolutely mortal, unleſs the part be immediately cut off, or burnt with a red-hot iron. Some of their ſcorpions are four or five feet long, but their ſting is not reckoned ſo dangerous as thoſe in Europe. They have alſo lizards three or four feet in length, and in great numbers; and alſo creatures called centipedes, or hundred legs, very venomous and troubleſome. Add to theſe thoſe little animals, mentioned in the Philoſophical Tranſactions, N°. 139, called *Poux de Pharaon*, that is, Pharaoh's lice, which get into the feet between the ſkin and the fleſh, growing in one day as big as beans; and if they are not preſently extracted, they cauſe an intolerable ulcer, and the whole foot corrupts.

Among the fiſhes to be met with in the ſeas of South America, particularly on the coaſt of Braſil, is a remarkable one called the globe-fiſh, from its orbicular form, or the ſea hedge-hog, as being beſet all round with large ſpikes like thoſe of the land one, whereby it bids defiance to all fiſhes of prey, and has a ſurpriſing facility of moving itſelf forward on the water by the contraction and motion of thoſe prickles.

But of all the animals in theſe ſeas, there ſeems to be none more curious than the ſea-bladder, which has not been taken notice of by many authors. It is not unfitly ſtiled a bladder, being in moſt reſpects like one, and ſwimming on the ſurface of the waves. It is of an oblong roundiſh form, five or ſix inches in diameter, has a ſkin very thin and tranſparent, and, like a bubble raiſed on the water, reflects all the colours of the ſky. The inſide is only filled with air, except about a ſpoonful of water which ſerves to balance it; and underneath it has a ſet of fibres of a vermicular form, which the creature extends or contracts, and thereby moves itſelf along. On its back it has a kind of plaited membrane, which it likewiſe expands or folds up at pleaſure, in order to take in more or leſs wind; and it is only by theſe two laſt circumſtances that they are known to move ſpontaneouſly, except when the wind is too ſtrong for them to reſiſt, by which they are frequently drove on ſhore and taken.

In

In the ſeas we are ſpeaking of, as well as in ſome others, is to be found the little fiſh called the remora, or ſucking-fiſh, reſembling a herring, with creſt and fins, having a ſucker about two inches long on the top of his head. The mouth is wide, the eyes ſmall, the under jaw longer than the upper, with two rows of ſmall ſharp teeth. This fiſh was much talked of amongſt the antients, who ſuppoſed, as appears from Pliny, that by ſticking to the ſide of a ſhip, it was able to ſtop the veſſel under full ſail, or a whale in ſwimming. But, as Mr. Cateſby obſerves, a number of theſe fiſhes can do no more than ſhells, or corals, and other foulneſſes of the ſame bulk, which make a ſhip ſomewhat ſlower; and in the ſame manner they may be ſome ſmall hundrance to a whale. The ſame author aſſures us he has taken five of them off the body of a ſhark; and hence we call it the ſucking-fiſh.

In the ſeas of South America, and eſpecially about the Tropics, are often ſeen ſwimming in ſhoals thoſe fiſhes we call old wives and old huſbands, which indeed make a very remarkable figure. The former is commonly about ten inches long, and five in breadth; has a very ſmall mouth, with ſharp teeth, a large eye placed high on its head, two noſtrils or ventholes under the fore-part of the eye, a riſing ſharp back, the belly flattiſh, and the whole fiſh is covered with a hard cruſtaceous ſkin, of a brown colour, but curiouſly marked with indented ſpots, which are large on the ſides, and

ſmaller

ſmaller about the head and tail. The tail is long and ſlender, and the fiſh can draw it into its body at pleaſure, as it were into a ſocket. It has four fins of a lighter brown than the body, as is alſo the end of the tail.

The old huſband, ſuppoſed to be the male ſpecies, ſeems deſigned by nature for the defence of the female, as well as his own, being armed with two ſharp horns on the fore part of his head, growing from a thick baſis, about three quarters of an inch in length; and though but ſlender, they are ſo ſtrong, that he is capable of giving dangerous wounds to the ſides of an enemy. His hinder part is likewiſe well guarded with two long fins like his horns, one on each ſide of the belly near the tail; and when cloſely chaſed, he draws up his tail, and bids defiance with his horns to his purſuers. Theſe two fiſhes ſwim together in company, and, except the horns, they pretty much reſemble each other.

The rattle-ſnake, is an animal for which Braſil is remarkable, amongſt others of the ſerpent kind, though not peculiar to that country, but found commonly enough in moſt of the warm parts of America. Some of theſe terrible animals are as big as a man's leg, and long in proportion, but their uſual length is from three to five feet. The head is ſmall in proportion to the body, but the mouth is capable of opening to a prodigious width. The whole body is covered with ſcales, thoſe on the head being

being very ſmall, thence they become gradually larger as they reach the middle of the body, and from the middle to the tail they decreaſe again. The back is of a mixed colour, being a dead yellowiſh brown, variegated with blotches of black and yellow, and a number of ſmall dots of the ſame colours, the larger blotches being laid with great regularity, and the whole making a beautiful appearance. The ſcales become darker as they approach the tail, where they are almoſt black; and thoſe on the ridge of the back, from the head to the tail, are raiſed into a ſort of ſharp prominence in their center; but thoſe on the ſides are flat and plain. The belly is entirely covered with oblong parallelogram ſcales laid tranſverſely; theſe are very bright, gloſſy, and of a yellow colour ſpotted with black. The rattle, from whence the creature has its name, is fixed to the laſt vertebra of the tail, and is compoſed of a ſeries of ſmall bones, that next the tail being of a bluiſh grey colour, and the reſt of a pale brown. Theſe bones are hollow, very thin, hard and dry, of a brittle texture, and very ſonorous. As the animal moves this tail makes a rattling noiſe, which gives notice of its approach; and moſt authors aſſert that a joint is added to it annually. The poiſonous teeth of this ſnake are ſituated on the outſide of the jaw, in the anterior part of the mouth, and fixed to two bones. Theſe in their natural ſtate are not viſible, even when the creature's mouth is opened, unleſs it be with an intent to wound; for they lie back under a membranaceous covering,

covering, and the creature has a power of erecting and wounding with them at pleaſure. They are crooked, and have a hollow at their bottom, and at the point a very plain and evident ſlit, reſembling the nib of a writing pen. From this ſlit to the bottom the teeth are hollow; and, on preſſing the gums of a dead rattle-ſnake, the poiſonous juice may be ſeen to aſcend by degrees up the teeth, and at length to be diſcharged out of the ſlit at the point; which clearly evinces in what manner the poiſon is conveyed into the fleſh, when the creature bites. The wound always proves mortal if ſome ſpecific is not inſtantly applied; and the moſt ſovereign antidote known againſt the dreadful effects of this poiſon, is the root of the rattle-ſnake plant, which grows in all countries where this ſnake is found. The method of uſing it is by pounding, or chewing, and applying it to the wound as a plaſter. This creature, however, ſeldom bites paſſengers, unleſs trod upon, or otherwiſe provoked, which the Indians, who eſteem its fleſh a great delicacy, often do by hunting it; and when thus purſued, if it has but an inſtant to recover, it folds itſelf round, placing its head in the center, and then darts itſelf with the utmoſt violence againſt its antagoniſt, who receives the bite with the greateſt calmneſs, aſſured of an immediate cure by the above roote, which they always carry about them.

The power of faſcination which the rattle-ſnake is ſaid to poſſeſs, has long employed the

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pen of naturaliſts in vain. Many have entirely denied the fact, while others as ſtrongly plead for it. The latter, however, are moſt to be credited; for it is certain that the animal has this power, though the cauſe from whence it proceeds will perhaps never be ſatisfactorily explained. Nor is it the rattle-ſnake alone that enjoys it; it is common to every ſpecies of vipers, and the toad is ſaid to poſſeſs it. Even the effect which the eye of a ſetting-dog has on a partridge is ſimilar to it; for when once the eyes of the bird have met thoſe of the dog, it ſtands confounded, entirely regardleſs of itſelf, and eaſily ſuffers the net to be drawn over it.

VEGETABLES.

OF the vegetable productions of America, there is none more juſtly celebrated than the tree generally called Quinquinia by botaniſts, and Cinchona, by Linnæus. It is alſo called Feverwood, on acount of its bark, which is a celebrated febrifuge, removing all kinds of intermitting fevers and agues, and is commonly called the Jeſuits Bark. The tree that produces this noble ſpecific grows only in the inland parts of Peru, on the mountains near Loja, or Loxa, in the province of Quito; at leaſt the beſt ſort, for there are different ſpecies of this tree, is no where elſe to be found, according to the account

count of Mr. Arrot. It is a pretty tall tree, and has a trunk rather bigger than a man's thigh, tapering from the root upwards, and free from branches till near the top, where they ſhoot out as regularly as if they were lopped, forming with the leaves the figure of a hemiſphere. The bark is of a blackiſh colour on the outſide, and ſometimes mixed with white ſpots, from whence commonly grows a kind of moſs, which the Spaniards call Barbas. Its leaves are much like thoſe of our plum-tree, of a darkiſh green colour on the upper ſide, and reddiſh on the lower. It bears a red flower, which is ſucceeded by a ſort of pod, incloſing a ſeed ſomewhat like a hop-ſeed; though Dr. Oliver repreſents its fruit as reſembling a cheſnut. The ſoil where the beſt ſort thrives is generally a reddiſh earth or rocky ground, and frequently on the banks of the rivulets that fall from the mountains. Mr. Arrot adds, that it flouriſhes and bears fruit at the ſame time all the year round.

The bark-trees do not grow together in great numbers, but are intermixed with others in the woods. Sometimes, indeed, it happens that cluſters of them are found together, but at preſent they are much ſcarcer than in former times, a great many fine large ones having been entirely cut down, in order to come at the bark the more eaſily. The propereſt ſeaſon for cutting the bark is from September to November, the only time in the year that there is ſome intermiſſion from rain in the mountains. Having

ing diſcovered a ſpot where the trees moſt abound, the workmen build huts near it for themſelves, and a large hut to put the bark in, to preſerve it from the wet: but they remove it from hence as ſoon as poſſible to the neareſt plantation or farm-houſe in the low country to dry, which is done by ſpreading it abroad in the open air, and turning it frequently. The Indians, who are the cutters, are each provided with a large knife, and a bag that will hold about fifty pounds of green bark. Two of them take one tree, from whence they cut or ſlice down the bark as far as they can reach from the ground; and then taking ſticks about half a yard long, they tie them to the tree with tough withs at proper diſtances like the ſteps of a ladder, always ſlicing off the bark as far as they can reach, before they fix a new ſtep. Thus they mount to the top, the Indian below gathering what the other cuts; and this they do by turns, going from tree to tree, till their bag is full; which, when there is plenty of trees, is generally a day's work for one Indian. Our author tells us, that after a tree is ſtripped of its bark, it requires eighteen or twenty years to grow again; which is quite different from Dr. Oliver's account, who ſays, it grows again in four months.

Mr. Arrot had the curioſity to ſend a conſiderable quantity of bark from the woods to the city of Loxa, where he put it into a large open houſe, and dried it under cover, never expoſing it either to the ſun or the air of the night;

imagining that the ſun exhaled many of its fine parts, and that the night-air was very pernicious to it: but he found the colour of the bark, thus cured, not near ſo bright and lively as that dried in the open air. This beſt ſort of bark, he imagines, will laſt but a ſhort time, or at leaſt it will be extremely hard to be got, by reaſon of its diſtance from inhabited places, the impenetrability of the woods where it grows, and the ſmall number of Indians to cut it, who by the cruel uſage of the Spaniards are daily diminiſhing, and in a few years will perhaps be extirpated out of that country.

It is not certain how the qualities and uſe of this remarkable bark came firſt to be known, but it is the common opinion at Loxa that they were known to the Indians before ever the Spaniards came amongſt them; and that it was by them applied in the cure of intermitting fevers, which are frequent in thoſe wet parts of Peru. According to the account of the Spaniards, however, the virtues of the Peruvian bark were diſcovered in the following manner. Near the town of Loxa, ſay they, was a lake ſurrounded with quinquina trees, which being blown down, or accidentally thrown into the lake, communicated a bitter taſte to the water, ſo that the inhabitants, who uſed to drink it, could uſe it no longer. But a certain Indian, who had a violent fever upon him, and conſequently an intenſe thirſt, finding no other water, was forced to drink of this, by which he was perfectly cured. He related this accident

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to ſome of his neighbours, and ſeveral perſons afflicted with fevers made the ſame experiment with the ſame ſucceſs. Upon this they ſet themſelves to diſcover what had given this febrifugous quality to the water of the lake; and found in the firſt place that a great number of trees had fallen into it; and ſecondly, that in a courſe of years theſe trees being rotted in the water, it loſt its bitter taſte, and at the ſame time its virtues; whence they concluded, that its quality was owing to the trees. Then they infuſed all the parts of theſe trees in water, and found that their whole efficacy reſided in the bark. This medicine, however, remained a ſecret to the Spaniards, till the year 1640, when it was diſcovered a by ſoldier, who by its means had the good fortune to cure the vice-queen of Peru of an intermittent fever, which had baffled the ſkill of her phyſicians. From this time the Spaniards began to uſe it with wonderful ſucceſs; and in 1649 Father de Lugo, a jeſuit, then procurator-general of his order, and afterwards cardinal, brought it to Rome; upon which the ſociety of jeſuits ſoon raiſed its reputation in Europe, and got a great deal of money in a ſhort time, ſelling it for more than its weight in gold, and never parting with it but in powder, in order to diſguiſe it the better. At this juncture the phyſicians were divided with reſpect to the Peruvian bark, ſome looking on it as a divine medicine, whilſt others believed it dangerous, and even fatal in many caſes; but its reputation was only loſt through the

ignorance of the manner of preparing and prescribing it; for about the year 1679, Mr. Talbot, an Engliſh phyſician, brought it into vogue, by the great number of cures he wrought about the court and city of Paris, with the powder prepared after his manner; the ſecret whereof was afterwards made public, by the munificence of Louis XIV. who rewarded Talbot for the communication with five thouſand crowns.

This noble medicine is ſold either in bark or in powder. If bought in the bark, it muſt be choſen dry and compact, ſuch as has never been damaged by wet, and is not too eaſily reduced into powder by breaking. The ſmall blackiſh barks, ſhagreened without, and reddiſh within, of a bitter diſagreeable taſte, are the moſt eſteemed. But this little ſort, which curls up like ſticks of cinnamon, and is ſuppoſed to be peeled off the branches, Mr Arrot tells us is only the bark of the younger trees, which twiſts up in that manner on account of its thinneſs; for he ſays the bark of the branches would not anſwer the trouble and expence of cutting.

As to the powder, it ought to be well ſifted, and bought of perſons that may be truſted, it being ſophiſticated, and the cheat not readily diſcovered.

There is another bark, called Winter's bark, or Winter's cinnamon, becauſe brought by captain Winter from the ſtreights of Magellan, where the tree grows in great abundance: but it

it is to be obſerved, that the wild cinnamon ſold in the ſhops is not the true *Cortex Winteranus*, though paſſed off under that name. There are barks of different trees, growing in very different places, by outward appearance ſeeming quite different from each other, and even alike with regard to taſte, ſo that they may be uſed as a ſuccedanum to each other; but the true Winter's bark is much to be valued beyond the falſe, which is generally ſold in the ſhops, being far more aromatic.

We ought not to omit another excellent root growing plentifully in Brazil and Peru, namely, ſarſaparilla, which began to be much celebrated about the ſame time with the China root, as appears from an epiſtle of Veſalius. The root divides itſelf into a great number of filaments, ſix or ſeven feet long, browniſh without, and white within, only marked with two red ſtreaks; and its branches creep along the ground, or up the trunks of other trees like ivy.

In the ſouthern parts of America we find ſeveral trees which furniſh us with healing medicines, particularly the Peruvian balſam. Of this there are two kinds, the white and the black; but the former is accounted beſt, and is by way of eminence called balſam of inciſion, becauſe flowing from a large tree upon making inciſions in the bark. This ſpecies is limpid, of the conſiſtence of turpentine, of a fragrant ſmell, and much ſcarcer and dearer than the black ſort, but it is frequently adulterated with Venice turpen-

tine. We have large quantities of the black ſort imported, which is prepared by boiling the branches, bark, and leaves of the trees; but this is likewiſe often adulterated, which however may be known by its being thick and coagulated, and wanting its penetrating taſte and ſmell.

The balſam of capivi is produced from a tree growing in Brazil, and brought to us from Rio de Janeiro and other places in earthen veſſels. There are two ſorts of it, the one very limpid, the other pretty thick; but the difference depends upon the different ſeaſons of gathering it.

To theſe we may add the balſam of Tolu, the produce of a tree growing in Terra Firma, of a tough reſinous conſiſtence, of a yellowiſh colour, of an highly fragrant ſmell, and aromatic taſte. In taſte and ſmell it reſembles the balm of Gilead, and as it grows old it becomes friable, and aſſumes the conſiſtence of a dry balſam.

There is ſtill to be mentioned a very celebrated plant of the ſhrub kind growing in ſome parts of South America, eſpecially Paraguay, by which name it is called, though better known amongſt us under the denomination of South-ſea tea. Its uſual height is about a foot and a half, its branches are very ſlender, and its leaves like thoſe of ſena. It may be looked upon indeed as a ſort of occidental tea, which, like the oriental,

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is infuſed in hot water, and communicates to it a colour and ſmell nearly like thoſe of the beſt tea brought from the Eaſt Indies. Of this plant there are two kinds, the one called Paraguay, the other camini, which laſt is moſt eſteemed, and ſold for a third more than the other. The firſt is chiefly uſed by domeſtics and ſlaves, but the latter is the drink of the richeſt people; and both are of ſo much uſe, and eſteemed of ſuch neceſſity, that nobody in that part of America will live without them. In the mines of Potoſi, as we have already obſerved, the poor ſlaves could not live without a conſtant ſupply of Paraguay, which is their remedy againſt the mineral ſteams that otherwiſe would ſuffocate them; and it is ſaid that no ſervant will engage himſelf with a maſter but on condition that he has paraguay for his uſual drink. This plant makes a very conſiderable article in the commerce of that part of the world, and paſſes almoſt wholly through the hands of the jeſuits. The uſe of it began once to obtain in England, and ſeemed to be approved of as well as tea; but of late years it has not been much regarded. The preparation of it, and the making of it into drink, is much the ſame with that of tea, except that both the leaves and wood are uſed, and the liquor drank immediately out of the veſſel it is made in, which the company ſuck through a ſilver or glaſs tube, handed round from one to another.

Nor ſhould we forget the American wood called Brazil, commonly ſuppoſed to have had its name

name from that country, though Huet ſhews it was known many years before Brazil was diſcovered. It is variouſly denominated, according to the places whence it is brought, as Fernambuco, Japan, the Antilles, &c. but it always grows in a dry barren ſoil, and even in the middle of rocks. The tree is tall, uſually crooked and knotty, and has a bark of a ſurpriſing thickneſs. It bears flowers of a very beautiful red, which ſmell agreeably, and are ſaid to ſtrengthen the brain. The wood itſelf is very heavy, crackles much in the fire, and ſcarce raiſes any ſmoke, by reaſon of its extreme dryneſs. That of Fernambuco is eſteemed the beſt, and is to be choſen in thick pieces, cloſe, ſound, and ſuch as being chewed taſtes ſomething like ſugar. It takes a good poliſh, and is much uſed in turned works, but more frequently in dying, as it gives a red colour, though none of the moſt laſting. In medicine it is reckoned to mitigate the heat of fevers, and is ſtrengthening and reſtringent.

Many more productions of the vegetable kind in this part of the world are very remarkable, particularly a large prickly ſhrub, as thick as a man's leg, and growing to the height of ten or twelve feet, but bearing neither leaf nor fruit.

The Mammee is a tall ſtreight-bodied tree, without knots or limbs for ſixty or ſeventy feet, but afterwards ſpreading into ſeveral ſmall branches, growing thick and cloſe together.

Its bark is of a dark-grey colour, thick and rough; its fruit bigger than a quince, round, and covered with a thick rind. When the fruit is ripe the rind is yellow, and will peal off like leather, but before it is brittle. Under the rind the pulp is alſo yellow, and in the middle are two large ſtones, flattiſh, and each of them much bigger than an almond. The fruit ſmells well, and the taſte is not diſagreeable.

In Terra Firma there are ſeveral ſorts of mangrove trees, beſides thoſe which we have mentioned in Africa. They are black, red, and white, the firſt of which is largeſt, being as big as many of our oaks and to the height of about twenty feet very ſerviceable timber, but extraordinary heavy, and therefore not much uſed in building.

The red mangrove grows commonly by the ſea-ſide, or by creeks and rivers, and proceeds from ſeveral roots, which about eight or ten feet from the ground join into one trunk or body, ſo that the tree ſeems to be ſupported by ſo many artificial ſtakes. The inſide of the bark is red, and is much uſed in the Weſt Indies for tanning of leather.

The white mangrove does not grow ſo large as the other ſort, nor is it of any great uſe.

We ſhall conclude this article with a deſcription of a very uſeful tree, viz. the cacao or chocolate

colate nut-tree, which is found in ſeveral parts of the Weſt-Indies, but no where ſo plentifully as on the coaſt of the Carracas. This tree nearly reſembles our dwarf apple-tree both in body and branches; but the leaf, which is of a deep green, is conſiderably broader and longer. The nuts, which are of the colour and about the ſize of an almond, hang fifteen or ſixteen together by a ſmall ſtringy film, incloſed in a pod ſhaped like a large cucumber, and pointed at the upper end. When the pod is ripe it is of a beautiful yellow colour, entermixed with blood red ſtreaks; but when dried it ſhrivels up, and turns to a deep brown. The juice expreſſed from the mucilaginous pulp contained in the huſk of theſe nuts reſembles cream, and is poſſeſſed of a grateful taſte and cordial quality; and the nuts themſelves are ſaid to be ſo nutritive, that an ounce of them contains more real nouriſhment than a whole pound of beef. The tree is difficult to cultivate, and the climate it grows in ſo warm, that, to guard it from the ſun, it is planted in the ſhade of another tree, called mother of cacao; and the profit ariſing from the fruit is ſo conſiderable, that we are told ſome of the Spaniards make five thouſand pound ſterling per annum from one plantation of cacaos. In ſome parts of America the nuts are uſed by the natives as money, twelve or fourteen being eſteemed equivalent to a Spaniſh real, or about ſeven pence ſterling. What renders the cacao nut famous, is its being the principal ingredient in chocolate, a factitious ſubſtance firſt brought from

from America into Europe by the Spaniards about the beginning of the laſt century.

FOSSILS.

ALMOST every part of South America afford mines of gold and ſilver, but thoſe rich metals are moſt abundantly found in Chili and Peru, as well as large quantities of copper, tin, lead, and quickſilver. It is obſerved, that, of all the metals, gold is moſt frequently found native; being rarely met with in a ſtate of ore, and then intermixed with the ores of other metals. But though native gold be free from the penetrating ſulphurs which reduce other metals to ores, it is very ſeldom found pure, but has almoſt conſtantly a mixture of ſilver with it, and frequently of copper. If it have any conſiderable quantity of copper in it, it is eaſily diſcovered by its hardneſs, but the ſilver is not ſo readily detected. Sometimes the native gold is found in the mines in pure maſſes, ſo large as to weigh twelve, fourteen, or ſixteen ounces; but theſe are very rare. Its more common appearance, in its looſe ſtate, is in form of what is called gold-duſt, that is, ſmall particles mixed among the ſand of rivers, which is very frequent in Guinea, and many other parts of the world: but native gold is alſo found in a middle ſtate, as to ſize, between the two kinds juſt mentioned

mentioned. in the clifts or perpendicular fiſſures of the ſolid ſtrata, in the mountains of Chili. Theſe fiſſures are uſually filled with a reddiſh earth, the native gold being either looſe amongſt it, or immerſed in a debaſed cryſtalline ſtone of a bluiſh hue, and generally in flattiſh pieces, from the ſize of a ſmall pea to that of a horſe-bean; but no great quantity has yet been diſcovered. When they have dug out this red marle, it is carried on mules to the lavaderos, as they call them, a ſort of baſons of water, where it undergoes ſeveral repeated lotions in different waters, till the earthy and impure parts are all ſeparated and carried away by the ſtream, and the gold left at the bottom.

In theſe forms gold frequently appears in thoſe parts of the world where it abounds, but ſtill the greateſt quantities of it are found bedded in maſſes of hard ſtone, which lie at vaſt depths, being often dug at a hundred and fifty fathoms. There is no peculiar ſtone in which it is immerſed, but it is met with indiſcriminately in ſeveral kinds, ſome ſofter, ſome harder, and even in earths. The richeſt maſſes are uſually a whitiſh but opaque ſtone, which is a debaſed chryſtal, containing a great deal of white earth, often tinged likewiſe with black, and ſometimes with other colours. In this ſtone the gold lies in a great variety of figures, ſometimes like ſmall branches, at other times interwoven in narrower or broader veins, or in little flat ſpangles, intermixed with ſpecks of black. But, beſides this ſort, there are many coarſer

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ſtones in the mines of Peru, which contain conſiderable quantities of gold, viſible in large or ſmall ſpots; and theſe are of all colours, but generally white or reddiſh. In theſe ſtones the gold is commonly in ſmall ſpangles.

In order to ſeparate the gold when dug out of the mines, they firſt break the metalline ſtone or ore with iron mallets, and then carry it to the mills, where it is ground to a very fine powder, which is afterwards paſſed through ſeveral braſs-wire ſieves, as fine as any we have made of ſilk. The powder thus prepared is laid in wooden troughs, with a proper quantity of mercury and water, where it is worked together, and there left to ſaturate in the ſun and air for eight and forty hours. During this time the mercury imbibes all the gold, without cohering with the coarſer earth or ſand, which, upon inclining the trough, is eaſily waſhed away with the water. The maſs which remains now concreted at the bottom is nothing but gold, mercury, and ſome fine earth, which laſt they diſengage from the maſs by repeated affuſions of hot water, and the mercury they ſeparate by diſtillation in large alembicks. The gold in this ſtate, though not yet perfectly pure, is called virgin gold, as well as that found in the ſand of rivers, or that in grains in the mines, in regard none of them have paſſed the fire. After this they uſually fuſe it in crucibles, and caſts it into plates or ingots.

The next metal to gold in value is ſilver, and of this the mines of Peru and ſome other parts of America afford the greateſt quantities of any in the world. This metal, as well as gold, is found native more frequently than in a ſtate of ore; what are commonly called ſilver-ores, ſays Dr. Hill, being no other than ſtones of various kinds, in which are bedded large quantities of native ſilver. Sometimes it is alſo contained in the ſofter foſſils, as earths; and ſometimes it is found looſe among ſtrata of ſand. That which is lodged in ſtone is uſually diſpoſed in flat maſſes variouſly ſtreaked, ridged, and often reſembling ſilver lace; that in earths is frequently branched, and that among ſand in ſmall roundiſh or oblong granules. However, though ſilver is often found thus native and pure, it is likewiſe frequently met with in a ſtate of ore, and ſometimes embodied in the ores of other metals. The proper and peculiar ores of ſilver are alſo very various in their appearance, but its moſt uſual ore is a ſingular and remarkable body being naturally malleable. The colour of this is a blackiſh blue, and it ſo nearly reſembles lead that many have miſtaken it for that metal in its native ſtate. It is found in large irregular maſſes, ſometimes of a laminated ſtructure, extremely heavy, and very rich in metal, containing often three fourths of pure ſilver; but among theſe are uſually found ſome of a more debaſed nature, containing much leſs ſilver, and diſtinguiſhed from the reſt by their not being malleable, and of a paler colour.

Another appearance of ſilver in the ſtate of ore is in browniſh maſſes, obſcurely tranſparent, not a little reſembling the coarſer ſorts of amber. Theſe are uſually of an irregular ſhape, often in the form of our common pebbles, but ſometimes flatted and with rugged edges. This ſort of ore breaks with a ſlight blow, and is alſo very rich in ſilver, uſually containing near two thirds of its weight in metal. But there is yet another appearance of ſilver ore, ſuperior to all other ores in beauty, being a compact ſubſtance, of a regular texture, of a very bright red, a ſmooth even ſurface, and conſiderably pellucid. This very much reſembles the native Sandarach, and is ſometimes exactly of the fine florid red of that body, and now and then approaching to a crimſon.

Theſe are the more uſual appearances of ſilver in a ſtate of ore, but it is found with numberleſs accidental variations; and there are ſtones of all colours and conſiſtences wrought in different places for the ſilver they contain. In the mines of Peru, ſome of the ores, as they are called, are grey ſpotted with blue and red; others have various ſhades of red, with admixtures of yellow or brown; and others are black, green, or yellow. Some of theſe are of the nature of one or other of the ores above deſcribed, only debaſed by adventitious mixtures; the others are ſtones wherein native ſilver is lodged, which are commonly confounded with the reſt under the name of ſilver ores. The black ores are the richeſt and moſt eaſily

wrought, and the ſilver they yield is of the beſt ſort. The veins of ſilver of what quality ſoever, are uſually richer in the middle than towards the extremities; but the richeſt places are thoſe where the veins interſect.

The moſt celebrated mines of Peru are thoſe of Potoſi, which have now been opened above two hundred years, and yet continue to be wrought with equal advantage as when firſt diſcovered; only with this difference, that the veins, which were then almoſt on the ſurface of the mountain, are now ſunk to prodigious depths, ſome of the pits or wells being two hundred fathoms deep, and yet, which is very remarkable, not incommoded with water. What renders the working of the mines exceeding dangerous, are the exhalations ariſing from them, which are even felt on the outſide, and affect animals that graze in the neighbourhood; but within they ſtupify the miners, none of whom can bear ſo poiſonous an air above a day together. Sometimes it is ſo fatal as to kill on the ſpot, and oblige them to ſtop up the veins from whence it exhales. The mines of Potoſi are much the leaſt ſubject to theſe vapours, and yet without the herb Paraguay, the infuſion whereof is drank by the miners, as we do tea, theſe mines muſt ſoon be abandoned. Some millions of Indians have periſhed in them, and prodigious numbers continue to be deſtroyed yearly.

It is ſaid that the mines of Potoſi were accidentally diſcovered by a native, who purſuing his game up the mountain, and being like to fall, laid hold of a ſhrub that grew upon a vein of ſilver to ſave himſelf, and happening to pull it up by the roots, he ſpied the precious metal underneath.

This famous mountain, whoſe treaſure ſeems inexhauſtible, riſes in the form of a ſugar-loaf, is near a mile high, and about three miles in circumference at the bottom. But though the mines of Potoſi ſtill keep up their reputation, there are ſeveral more lately diſcovered, that are ſaid to exceed them in richneſs. Such are thoſe of Oruro, eight leagues from Arica, and thoſe of Ollachea, near Cuſco, opened in 1712. It is remarkable, that moſt of the mines of America are found in cold and barren places.

The manner of ſeparating ſilver from its marcaſite or ore is nearly the ſame as in gold. They break the ore in the ſtamping mill till it is reduced to powder, and then mix it up with mercury into a ſort of paſte, which they knead in the troughs till the water has by degrees waſhed away all the earthy particles. After this they ſtrain off part of the mercury from it through a woollen bag to ſerve again, and the reſt is made to evaporate by fire. The ſilver that remains behind is, laſt of all, perfectly refined from all heterogeneous matter by a ſolution of lead, which, exhaling from it, carries off in fumes the copper or other allay.

Another part of the riches of Peru are its mines of quickſilver, which afford ſurpriſing quantities of that uſeful mineral. Thoſe of Guancavelica or Oropeſa are the moſt famous, and are more conſiderable than the rich mines of Friuli in Europe, of which we have heretofore given an account. Frezier tells us, that the mines of Guancavelica ſupply all the gold and ſilver mills in that kingdom; but this ſeems to be a miſtake, ſince other mines are wrought which produce plenty of quickſilver. The earth containing the quickſilver is of a whitiſh red, like bricks half burnt, which being pounded, is put into an earthen furnace, whoſe top is vaulted like an oven. They ſpread it on a layer of common earth, wherewith the grate of the furnace is covered, under which they keep a ſmall fire made of a ſhrub they call icho, which is of ſuch neceſſity in theſe works, that the cutting it for any other uſe is prohibited for the ſpace of twenty leagues round. In proportion as the pounded mineral heats, the mercury riſes volatilized into ſmoke, which finding no vent through the capital of the furnace, which is exactly luted, eſcapes through a hole made for that purpoſe, communicating with ſeveral earthen cucurbits, each having a little water at the bottom. By means of this water the ſmoke is condenſed, and the quickſilver precipitates, and is taken out when the operation is over.

It is remarkable in this proceſs, that the farther the cucurbits are from the furnace, the more they are filled with quickſilver; and they

all grow ſo hot that they would break, if they were not ſprinkled from time to time with water.

The workmen employed in this buſineſs never hold it long, but become paralytic, and die miſerably. A precaution they uſe is to hold a piece of gold in their mouth, to embibe the pernicious effluvia, and prevent their paſſage into the body.

Having been ſo particular in our account of the gold and ſilver of the ſouth part of America, it will not be expected we ſhould ſay much concerning the baſer metals, eſpecially as we have ſpoken of them ſufficiently in Europe. We may juſtly obſerve however, that Chili abounds with copper, of which the Spaniards make their great guns for thoſe parts of their dominions, the bells of their churches, and family utenſils; ſo that ſince the working of the mines of Chili, no copper has been ſent from Spain, as they afford the Indies a ſufficient ſupply of that metal.

As to precious ſtones, though we have deſcribed moſt of them in our ſurvey of the Eaſt Indies, it is proper to obſerve, that rich mines of diamonds have lately been diſcovered in Braſil, and Peru is noted for its emeralds. The antients indeed, and Pliny in particular, miſtakenly reckoned up various kinds of emeralds, but the modern naturaliſts and jewellers only know of two, the Oriental and the Peruvian. Nay, according to Tavernier, theſe two ſhould be reduced

duced to one, namely, the Peruvian; for he maintains, that there is not, nor ever was, any mine of emeralds in the East Indies, but that all that are there found were brought from Peru by way of the South Sea, a commerce having been carried on thither by the Peruvians before the discovery of America by the Spaniards. However, such commerce not being sufficiently proved, we may keep to the distinction of Oriental and Peruvian emeralds, of which the former are harder, more brilliant and transparent than the latter, and besides, there are such quantities brought from Peru by the way of Carthagena, that they are much sunk in value and reputation.

MOUNTAINS, SPRINGS, RIVERS, &c.

IT is generally allowed, that the mountains of South America are not to be paralleled in any other part of the world, for their surprizing height and extent; witness that prodigious chain of them called the Andes, which begins in the most northen part of Peru, and extends itself quite to the Streights of Magellan, a length of between three and four thousand miles.

When travellers ascend the highest parts of these mountains, they cannot see the country below for clouds, whilst the sky is clear over their heads, and the sun shines out in its full lustre.

They

They ſometimes obſerve the rainbow far beneath them, and ſee ſtorms and tempeſts at a diſtance falling into the vallies, whilſt all is bright and ſerene above. We are told that there are fiery meteors about theſe mountains, ſometimes ſo high in the air as to reſemble ſtars, and ſometimes ſo low that they frighten the mules, by buzzing about their ears and feet; and it is no uncommon thing to have ſnow and thunder at the ſame time. There are alſo ſeveral volcanos in this chain of mountains, which ſometimes break out with dreadful violence, rending the rocks, throwing up great quantities of fire, and roaring ſo as to be heard at a vaſt diſtance.

The difference that travellers obſerve between the eaſt and weſt ſide of the Andes is ſo great, that they ſeem two different worlds. If from the top of them we look towards the eaſt, all is covered with thick vapours, which intercept the light of the ſun, and over-ſhadow all the country, engendering likewiſe frequent ſtorms of hail, with terrible thunder and lightning; but on the weſt there is not a cloud to be ſeen, the heavens being conſtantly ſerene and clear. Some who have paſſed the higheſt parts of the Cordilleras relate, that they found no ſnow on the top, though in the beginning of winter; whereas in the lower parts the ſnow was ſo deep that the mules could ſcarce travel. Theſe mountains indeed are only paſſable in ſummer, or before the winter is much advanced, on account of the ſnows and exceſſive cold:

cold: and even in the moſt beautiful ſeaſon, there are ſuch frightful precipices, with deep rivers at the bottom, as frequently occaſion the loſs of mules and travellers. The ſteepneſs of aſcent and deſcent makes the paſſage difficult; but the tediouſneſs of the way is in ſome meaſure alleviated by the agreeable caſcades, which are naturally formed amongſt the rocks and mountains. In ſome parts of the valleys the water ſprings up to a great height, like artificial fountains, amongſt odoriferous plants and flowers, which yield a delightful proſpect. Moſt of theſe ſtreams and ſprings are ſo exceeding cold, that a man can ſcarce drink them, nor hold his hand in them above a minute; but in ſome places there are hot ſprings, which leave a green tincture in the channel through which they paſs, and are reckoned good againſt many diſtempers. We read of a natural bridge of rocks over one of theſe rivers, from the vault whereof hang ſeveral pieces of ſtone reſembling icicles, formed, as the water drops from the rock, into various ſhapes, and of different colours. This bridge is broad enough for three or four carts to paſs a-breaſt; and there is another bridge near it, laid over by art, as ſome ſay, between two rocks; but an author, who ſaw it, thinks it is rather the work of nature. It is ſo far above the river, that he could not hear the ſtream, though it runs with great rapidity; and though the river be of a conſiderable breadth, it appeared like a brook when he looked down from the bridge, which he could not do without horror.

But

But, if we may believe Acoſta, there is ſtill a greater danger in travelling over ſome of the mountains of Peru, than any we have yet mentioned. He tells us, that there are mountainous uninhabited deſarts, where a ſudden blaſt of air ſometimes ſtrikes a traveller dead in an inſtant; and that the Spaniards formerly paſſed theſe mountains in their way to Chili, but now either go by ſea, or take another road by land, to avoid the danger of croſſing them, in which journey many have periſhed, and others have loſt their fingers and toes, and have been rendered cripples. The ſame author relates, that General Coſtilla marching over them with his army, great part of his men ſuddenly fell down dead, and their bodies remained there without ſtench or corruption. As incredible as this appears, it ſeems to be confirmed by the reports of our ſeamen, who aſſure us, that they have ſeen great numbers of bodies of men, women and children lying dead upon the ſands in Peru, and looking as freſh as if they had not lain there a week; but when they were handled they proved as dry and light as a ſponge or a piece of cork. Whatever was the cauſe of the death of theſe people, it is agreed on all hands, that the dryneſs of the Peruvian air, and the heat of the ſands, preſerved their bodies from putrefaction.

The rivers of South America, eſpecially thoſe which take their riſe to the eaſtward of the mountains we have been ſpeaking of, deſerve our notice, ſome of them being the largeſt in the world.

world, both with regard to their depth and breadth, and the length of their courſe; but moſt of thoſe that riſe on the weſt ſide of the Andes are rather torrents than rivers, made by the annual rains that fall on the mountains.

The Rio Grande, or Magdalena, which has its ſource in the province of Quito in Peru, near the equator, runs directly northward above a thouſand miles, and falls into the ſea between Carthagena and St. Martha.

The celebrated river Oronoque, or Oronoko, which has its ſource not far from that of Magdalena, after a winding courſe of fifteen hundred miles or upwards, falls into the North Sea near the iſle of Trinidad, forming a large gulf, in which there are many ſmall iſlands.

But the moſt amazing river, and generally ſuppoſed the largeſt in the world, is that of the Amazons, which riſes about ten leagues from Quito in Peru, and after many windings and turnings keeps its courſe to the eaſt till it falls into the Atlantic ocean between the caſts of Guiana and Brazil. Its channel, about ſixty leagues from its head, is three miles broad; and as it receives many large rivers in its courſe, it grows wider and wider as it advances towards the ocean, where its mouth is fifty or ſixty leagues in breadth. Even before it leaves Peru, its depth is ten or twelve fathom, from whence it increaſes to twenty, thirty, fifty, and ſometimes much more, before it reaches the ocean.

From

From its ſource to its mouth it is eight or nine hundred leagues in a direct line; but the windings make it about twelve hundred, or eighteen according to ſome computations. In the year 1639, Texeira, a Portugueſe, employed himſelf ten months in making a ſurvey of this great river.

There is another river of South America little inferior to the former in breadth and depth, though it does not come up to it in length of courſe, viz. that called Rio de la Plata, which, reckoning only from the confluence of the two rivers that form it, runs above two hundred leagues, and is all the way navigable for the largeſt veſſels, and full of delightful iſlands. In its courſe it receives ſeveral conſiderable rivers, and ſometimes ſwells to ſuch a height as to overflow a great deal of land on each ſide, during which time the natives betake themſelves to their canoes, and when the innundation abates, return to their old habitations. It falls into the ocean by a mouth thirty leagues broad, running with ſuch ſtrength and rapidity, that it takes off the ſaltneſs of the ſea to the diſtance of ſeveral miles. A certain author tells us, that the water of this river is very clear, ſweet, and excellent for the lungs, ſo that the people who drink it have melodious voices, and are generally inclined to muſic; but ſuch an account is too wimſical to be regarded. He adds, that it petrifies the branches of trees that fall into it, and that veſſels of various figures are naturally formed of its ſand, which keep water cool, and

look as if they had received an artificial poliſh.

We ſhall only mention one more river, or at leaſt a conſiderable ſtream of water, remarkable for its ſubterraneous paſſage. This is in the weſtern parts of Tucuman, a province of Paraguay, where it ſeems there is a very large and lofty mountain, which, from its glittering when the ſun ſhines upon it, is called the Cryſtal Mountain. Under this is extended a frightful cavern, through which runs a river, with ſo many windings and turnings, that the water is four and twenty or thirty hours in its paſſage from one ſide of the mountain to the other, according to the compution of ſome Portugueſe, who were raſh enough, as Purchas relates, to make the experiment, by hazarding their perſons on a rafter made of canes.

As to the qualities of the waters in the ſouth part of America, it is obſerved that ſome lakes in the vallies are extremely hot, particularly one near Potoſi in Peru, which perfectly boils up in the middle, where the ſpring riſes; but the heat is ſo moderate near the ſhore, that the inhabitants bathe in it frequently. In the ſandy plains near the coaſt of Peru there are very few ſprings, but a great variety in that part which is remote from the ſea; amongſt which there is one near Oropeſa, whoſe water is very hot, and after running a little way it petrifies and forms a rock. It is ſaid the natives uſe the ſtone in building their houſes, it being ſoft, light, eaſily wrought,

wrought, and yet very durable. Travellers alſo tell us of ſprings of liquid matter much reſembling tar, and put to the ſame uſes by ſeafaring people.

At the baths of the incas, as they are called, an appellation given to the antient kings of Peru, there is a ſpring of water that iſſues out hot and boiling, and another near it as cold as ice, which uſed to be tempered and mingled together for thoſe princes to bathe in.

Near Cuſco there is ſaid to be a fountain, whoſe waters, after a ſhort courſe, turn into ſalt.

From the top of the mountain Balconotta, by ſome reckoned the higheſt in Peru, there riſe two ſprings, which run different ways, and ſoon form two conſiderable ſtreams. Their waters, when they firſt iſſue from the rocks, are of an aſh-colour, hot and ſmoaking, and ſmell like burning coals; which ſmell they retain a great way from their ſource, till they mingle with other ſtreams, and become cool.

To theſe we may add another fountain in Peru, which ſends forth a ſtream almoſt as red as blood, from whence it has obtained the name of the Red River.

SECT. III.

Particular Deſcriptions of the moſt remarkable public Buildings, and other ſingular Productions of Art in South-America.

NOTHING very extraordinary can be expected in the account of the buildings of this part of the world, where the inhabitants, till lately, have been in a ſtate of barbarity, and total ignorance of the manual, as well as the polite arts. But as the incas, ingas, or kings of Peru, are famous in hiſtory, it may not be improper to give ſome account of the moſt remarkable ſtructures which the Spaniards found when they firſt invaded that country. At that time Cuſco was the capital of that kingdom, and there was a caſtle, built in ſuch a ſurprizing manner, that many perſons, who ſaw it, imagined it could not have been raiſed without the aſſiſtance of enchantment. This caſtle was a fortreſs, which ſtood on the top of a hill; and on the edge of a precipice, which, towards the town, was perfectly perpendicular. Towards the country, it was defended by tripple ſemicircular walls, of ſuch a height and thickneſs, that they were proof againſt all the force that could be brought againſt them: ſome of the ſtones were of ſuch a prodigious ſize, that it was inconceivable how they were hewn out of the quarry, or brought to the place; the natives having no iron tools, no beaſts to draw them, nor engines.

to

to raiſe them to ſuch a height. They were dragged, however, by the ſtrength of men, ten, twelve, or fifteen leagues, over hills and vallies, and along the moſt difficult roads: and there is a ſtone in particular to which the Indians gave the name of *Syacuſa*, which ſignifies the *weary*, becauſe it never arrived at the place for which it was deſigned. This rock was drawn fifteen leagues by twenty thouſand Indians, over very rugged and uneven ways; but notwithſtanding all their care and ſtrength, it got the better of them, and tumbling down a ſteep hill, killed ſeveral hundred men, who were endeavouring to poiſe the weight. They raiſed it, however, once again, and with incredible pains, dragged it to the plain, in the neighbourhood of Cuſco, where they were obliged to leave it, never being able to get it up the hill on which the caſtle was ſituated.

Between each wall of the caſtle, there was a ſpace of twenty-five, or thirty feet, which was filled up with earth, and every wall had a breaſt-work on the top of it. Beyond theſe walls, were three large towers, ſtanding in a triangle, anſwerable to the bending of the walls. The principal of theſe towers had a fountain of excellent water, brought to it by a ſubterraneous aqueduct, the ſource whereof was known only to the inca and his council, leſt an enemy ſhould diſcover the ſtream, and cut it off, in caſe of a ſiege. This tower was round, and in it the inca had an apartment, nobly furniſhed, like the reſt of his palaces. The other two were ſquare, and

contained rooms for the garriſon, who were all of the royal blood. Underneath theſe towers, were apartments as large as thoſe above; and they had a communication with each other by a ſubterraneous labyrinth, through which it was difficult for a ſtranger to find his way without a guide. It is ſaid, that great part of the new city of Cuſco, was built with the ſtones found in the ruins of this fortreſs.

The palaces of the incas, in Cuſco, beſides the caſtle juſt mentioned, were very ſpacious and magnificent, ſome of the halls being two hundred paces in length, and fifty or ſixty in breadth; inſomuch that the Spaniards converted one of them into a cathedral church. The ſtones of theſe buildings were ſo well joined together, that they needed no cement; but ſometimes for the ſake of ornament, they cloſed up the ſeams of their ſtructures with melted gold and ſilver, which occaſioned the total deſtruction of moſt of them, the Spaniards ſubverting the very foundations in hopes of finding treaſure. The furniture and decorations of theſe palaces, were the figures of men, beaſts, birds, and other animals, caſt in gold; and on the walls, inſtead of tapeſtry, were plants, and flowers of the ſame metal, intermixed with ſerpents, butterflies, and other reptiles and inſects. It is ſaid they had no chairs in their palaces, but the inca himſelf ſat on a ſtool made of gold, without arms or back, having a pedeſtal of the ſame metal: they had alſo ciſterns of gold in their bagnios, and the utenſils of their kitchens, and in the meaneſt

eſt offices, were likewiſe of gold; but they neither purchaſed houſes nor lands with this metal, as we do, but uſed it as an ornament when living, and buried it with them when they died. The royal gardens were not only planted with great variety of trees, flowers, &c. but the figures of thoſe and all ſorts of animals were made of gold, and placed in the walks to adorn them.

But notwithſtanding the magnificence of the palaces in Cuſco, nothing was comparable to the temple of the ſun, which was enriched with the greateſt treaſures that ever the world beheld. It was built of free-ſtone, and lined with gold, the cieling being alſo of the ſame metal, though the roof itſelf was no better than common thatch. It was divided into ſeveral chapels, cloyſters, or apartments; in the principal whereof, towards the eaſt, was placed the image of the ſun, conſiſting of one gold plate, that covered the whole breadth of the chapel, and twice as thick as the plates that covered the other walls. This image was of a round form, repreſenting the ſun with his rays darting from him, much in the ſame manner as he is drawn by European painters; and on each ſide of it were placed the bodies of the deceaſed incas, ſo embalmed that they ſeem to be alive. Theſe were placed on thrones of gold, but on the arrival of the Spaniards they were concealed by the Indians, with moſt of the treaſures of the temple.

This temple had ſeveral gates covered with gold; and round the top of it, on the outſide, was a cornice a yard deep, conſiſting of gold-plate. Beſides the chapel of the ſun, there were five others of a pyramidical form, the firſt of which was dedicated to the moon, deemed the ſiſter and wife of the ſun; and the doors and walls of this ſtructure were covered with ſilver. Here was the image of the moon, of a round form, with a woman's face in the middle of it; and on each ſide of the image were placed the bodies of the deceaſed empreſſes ranged in order. Next to this chapel was that of Venus, by the Peruvians called Chaſea, who was much eſteemed as an attendant on the ſun, as the reſt of the ſtars were deemed maids of honour to the moon; and this chapel was likewiſe plated with ſilver. The third chapel was dedicated to thunder and lightening, which they looked upon as ſervants of the ſun; and this was cieled and wainſcotted with plates of gold. The fourth was dedicated to the rainbow, as owing its original to the ſun; and this was alſo covered with gold, and had on one ſide of it a repreſentation of the rainbow. The fifth chapel was an apartment for the uſe of the high-prieſt, and others who officiated in the temple, who were all of the royal blood; and this, like the chapel of the ſun, was adorned with gold.

There was no other image worſhipped in the temple but that of the ſun, but they had the figures of men, women, and children, and of va-

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rious birds, beaſts, and other animals, of wrought gold, placed in it for ornament; and all the veſſels and utenſils were of the ſame precious metal. Mention is alſo made of a ſort of nunnery, in which were kept a thouſand or fifteen hundred virgins, all of the blood royal, who were intended only for the ſervice of the temple. Nor was it in the city of Cuſco alone that ſuch a temple was erected, but almoſt every large town in the country had one, adorned in the like ſumptuous maner.

CHAP.

CHAP. II.

Of NORTH AMERICA.

SECT. I.

A general Account of North America.

UNDER this diviſion of the American continent are comprehended New Spain, New Mexico, Canada, or New France, Florida, and the Engliſh Empire. But there is no part of it more celebrated in hiſtory than New Spain, or Old Mexico, which was a great and flouriſhing monarchy for ſeveral ages, governed by its own kings, choſen out of their chief captains, without regard to hereditary ſucceſſion, till 1521, when it was entirely conquered by the Spaniards, under Ferdinando Cortez; ſince which it has remained ſubject to the crown of Spain, and is governed by a viceroy, whoſe ſtated reſidence is at the city of Mexico.

As to New Mexico, it is ſo called becauſe diſcovered ſince the Old, and is ſometimes ſtiled by the Spaniards a kingdom, and ſometimes a province. The greateſt part, however, of this vaſt country is ſtill in the hands of the natives, who are a peaceable and generous people, but yet were not only more numerous, but better provided

provided for their defence than any other Americans the Spaniards had to deal with; who, at their firſt arrival in that country, which was about the year 1539, found them well cloathed, their lands cultivated, and large ſtocks of cattle, tolerable huts in their villages, and good ſtone-houſes in their towns. They were governed by petty princes or Caciques, whom they choſe for their wiſdom and valour: and though they worſhipped the ſun and moon, they ſeemed more willing to embrace the Chriſtian religion than any other of the American nations; but they did not ſeem at all inclined to part with their liberty, which, in a great meaſure, they ſtill preſerve. Of the various nations in this country, mentioned by the Spaniards, the principal are the Apachas, who thinking themſelves oppreſſed by the Spaniſh government, made an inſurrection towards the cloſe of the laſt century, and did a great deal of miſchief, but were at length ſuppreſſed, and have ſince been kept in awe by ſtronger garriſons. In the late reign of Philip the Fifth, the Spaniards likewiſe took care to people theſe northern provinces, by tranſmitting orders to the viceroy of Mexico, to ſend a number of poor families thither; a precaution in which they are certainly right, if it be only to guard againſt foreigners, it being very poſſible, according to Dampier, to make a deſcent oppoſite to the iſle of California, and penetrate to their richeſt mines. But if annual draughts of people were ſent from Europe into New Mexico, and there ſettled in convenient farms, it is likely they would ſoon grow populous, eſpeci-

ally as mankind increaſes more in cold than in hot climates.

The Sanſons mention a province in this country called Quivira, which they place on the frontiers of Florida, and ſay it has but few inhabitants, and thoſe very barbarous. The men are clad in the ſkins of cows, the women go naked, have very long hair, and eat raw fleſh; and they change their abodes as they are invited by the ſeaſons and paſtures. Their houſes are likewiſe covered with the ſkins of their black cattle, they make bow-ſtrings with their hair, awls and trumpets with their bones, cups with their horns, and fire with their dung, there being but little wood in the country.

Gemelli, the Popiſh miſſionary, tells us, that in 1698, when he was at Old Mexico, he diſcourſed with the governor of New Mexico, who told him, that though great part of this country had been lately conquered, there remained ſtill much more unſubdued; that the natives paint their bodies; that they are ſuch dexterous archers, that they can hit a piece of money thrown up into the air; that they are great lovers of the fleſh of mules, which they often take from travellers, without robbing them of the goods they carry; that the king of Spain maintains ſix hundred horſe, beſides foot, in ſeveral garriſons, to keep them in awe, but being at a vaſt diſtance from Old Mexico, the natives often revolt, becauſe they know the Spaniards cannot be ſpeedily reinforced. Gemelli adds,

that the ſoldiers are armed with muſkets, bucklers, and half pikes, and hunt the natives like wild beaſts, being ordered by the government not to kill, but to take them, in order to inſtruct and civilize them. The country, he obſerves, is plain and paſſable for carriages ſome months in the year; but they have ſuch wide deſerts to paſs, that the ſoldiers and travellers, who ſometimes do not ſee a cottage for ſeveral days, encamp every night, and are forced to keep guard for fear of being attacked by the ſavages. Travellers carry along with them matraſſes and pillions, or rather bladders of leather, which at night they blow full of wind to lay their heads on, and let it out in the morning, when they pack them up to proceed on their journey.

California is a country the moſt northern of any diſcovered and poſſeſſed by the Spaniards; the more ſouthern part of it was known to that nation ſoon after the diſcovery of Mexico, but it is only of late that they have penetrated into it, contenting themſelves before with the pearl-fiſhery on its coaſts. It was matter of doubt for a long time whether it was an iſland or joined to the continent; but in the lateſt maps it is laid down as a peninſula, which it really is, though it was not known to be ſuch till it was diſcovered by Father Caino, or Kino, a German Jeſuit, who landed in California from the iſland of Sumatra, and paſſed into New Mexico, without paſſing any other water than Rio Azul, or the Blue River, in about thirty-five degrees north latitude. On the north it is bounded by a con-

tinent unknown, on the eaſt by the province of New Mexico and the Gulf of California, which ſome call the Purple, others the Vermilian Sea, and by the South Sea on the ſouth and weſt.

Father Caino informs us, that the natives are tolerably well ſhaped, and very ingenious, that they live without houſes, or any ſhelter but trees in the ſummer, and caves in the winter. They were obſerved to kneel and pray on the firſt appearance of the new moon, but this father and other miſſionaries ſoon inclined many of them to embrace Chriſtianity. They know no government but the abſolute ſtate of nature, every man being a ſovereign in his own family; ſo that there are continual feuds amongſt them, which ſometimes break out into broils and bloodſhed. The men go for the moſt part naked, except a fillet of fine cloth about their temples, and ſome beautiful bracelets of pearl. The women, beſides their head-dreſs, generally wear a mantle of ſkins over their ſhoulders, a piece of cloth girt round their bodies, and chains of pearl about their necks and arms. Thoſe who live on the eaſt ſide of California are enemies to the Spaniards, but in other parts of the peninſula they ſeem hoſpitable to all ſtrangers.

Captain Rogers, who lay a conſiderable time at Cape St. Lucar, ſays, that that part was mountainous, barren, and ſandy, and had nothing but a few ſhrubs and buſhes, bearing ſeveral ſorts of berries. Here the natives had large limbs, were ſtrait, tall, and of a blacker complexion

complexion than any he had ſeen in the South Seas. The women look very coarſe and wrinkled. Their chief food was fiſh, which they ſtruck very dexterouſly with wooden inſtruments; and they were excellent divers. Their bread was made of a black ſeed ground, which taſted like coffee. They did not value glaſs beads, and ſuch-like toys, as the Indians uſually do; but they were very deſirous of knives and other ſharp weapons, all their cutting inſtruments being made of the teeth of ſharks and other fiſhes. They had long bows, with ſtrings made of a ſort of graſs, arrows of cane four feet and a half long, pointed with fiſh-bones; and they ſhot birds flying. The Spaniards have lately made a ſettlement near the Cape abovementioned, which is only a village, and called California.

The Spaniards pretend to have been the firſt diſcoverers of that large part of North America called Canada or New France; but this is denied by the French, who were till the late general peace poſſeſſed of the greateſt part of it, when Canada and Florida were ceded to the Engliſh. John Verrazzano, a Florentine, put on ſhore there for proviſions, and gave it the name of New France, in compliment to king Francis, who had ſent him to diſcover a northern paſſage into the South Sea. This Florentine captain, however, having been butchered by the wild natives, the French ſent thither James Cartier, from St. Malo's, who ſailed up as far as Quebec, but brought home a diſmal

account of the country, ſeeing nothing but high craggy mountains covered with ſnow, and a few barren plains, inhabited by naked ſavages. Notwithſtanding this, it was not long before ſome other ſhips were ſent thither again, who ſailed up higher, and made better diſcoveries of the great river of Canada, or St. Laurence, as the French call it; and towards the beginning of the laſt century, a new colony was ſent thither from Rouen, who ſettled there, though not without ſome difficulty and danger; but having fortified themſelves on each ſide the river, and received freſh colonies from France, they gradually enlarged their territories.

The natives of Canada, at the firſt arrival of the French in that country, were rude, ignorant, and barbarous, and the greateſt part of them ſtill continue ſo, there being few of them that ſhew any inclination for a life more polite and civilized. Their government, laws, and cuſtoms, are of the ſame nature, they being all divided into ſmall tribes under their ſeveral heads, ſome living in villages and poor wooden huts, and others leading a rambling life; but there is a difference in their diſpoſitions, ſome being more affable and humane, others quite cruel and brutiſh, and extremely tenacious of their barbarous cuſtoms. One of theſe cuſtoms, according to father Charlevoix, is, that as ſoon as their females have attained to the age of fourteen or fifteen years, they are allowed to proſtitute themſelves to whoever they pleaſe for the ſpace of three or four years; after which they begin to think

think of fixing their affections on a huſband, to whom, when married, they prove extremely conſtant and loving, and, if he dies, mourn for him all the reſt of their lives, without ever marrying another. This, ſays our author, joined to their licentiouſneſs before marriage, and their ſuckling their children ſo long as two, three, or even ſix or ſeven years, are the main cauſes of their infecundity; for in other reſpects both men and women are robuſt and ſtrong, and inured to the hardeſt toils and fatigues. Their eyes, he adds, are ſo ſtrong, that though they are continually dazzled with their ſnows, or darkened with the naſty ſmoke of their huts at leaſt ſix months in the year, they are not affected with either. Their hearing is no leſs quick; and our author ſays they can ſmell fire at a vaſt diſtance, but what he means we do not rightly underſtand. Their fancy is ſo lively, and their memory ſo ſtrong, that if they have once travelled through the largeſt woods or deſerts, or ſailed over any of their ſeas, which they do without the help of a compaſs, they can retain all the neceſſary obſervations, ſo as to repeat the ſame courſe at any diſtance of time. As to their poſſeſſions, they are in ſome meaſure in common, for whatever one wants, the others are all ready to ſupply. If one has met with ill ſucceſs in his hunting, the reſt will aſſiſt him with ſome of their own proviſions; and in general they deſpiſe money to ſuch a degree, that they will not touch it, calling it the ſerpent of the French, for the love of which they betray, rob, and kill one another.

The misfortune is, that travellers often contradict themſelves in the character they give of theſe people, ſome deſcribing them as one remove from wild beaſts, and quite incapable of being civilized, whilſt others repreſent them as gentle and hoſpitable, ſprightly, docile, and of a ſound judgment. But upon the whole, we need not be at a loſs to account for this difference of characters in ſo vaſt a tract of ground and ſuch variety of climates, where literature, commerce, religion, and laws, are almoſt ſtrangers.

What religion they have, conſiſts in ſome faint notion of a Supreme Being, to whom however they do not perform any outward worſhip, unleſs thoſe dances and ſongs, which they uſe at ſome particular times, be intended as ſuch. In all other caſes they ſeem to live without any love or fear of him, and to follow only the dictates of cuſtom and education. They have a great veneration for their old people, whom they always conſult in any emergencies, eſpecially in caſes of war, either offenſive or defenſive; for, like other Americans, they make alliances and wage war, one canton or tribe againſt another; and though their wars are ſhort, they are generally bloody, and end in the captivity or ſlaughter of the weaker party.

This may ſuffice at preſent for an account of the natives of Canada; which country, the reader is to obſerve, is divided into eaſtern and weſtern, the former commonly known by the name of Canada,

Canada, or New France, and the latter called Louiſiana, in honour of the late Lewis the Fourteenth, being in reality a large part of Florida, as it was originally named by the firſt diſcoverers; but the French have called it Louiſiana, ſince they made ſettlements in that country.

As to that part of Florida which borders on the Gulph of Mexico, it appears by a memorial preſented to king William III. that England had an undoubted title to it ever ſince the reign of Henry VII. by whoſe commiſſion Sebaſtian Cabot diſcovered all that coaſt fronting the Atlantic Ocean, twenty years before it had been viſited by any other European. Then indeed the ſouthern part of this continent, towards the Gulph or Streights of Bahama, was viſited by the Spaniards under Juan Ponce de Leon, as it was ten years afterwards by Vaſquez Aillon; in 1527, by Pamphilo Navarez, and in 1534, by Ferdinando Soto; but their cruelty ſo enraged the natives, that they expelled them all one after another. The laſt expedition of the Spaniards thither was in 1558, by order of Valeſco, then vicetoy of Mexico; but falling into diſſenſions among themſelves, they returned without making any ſettlements: nor have they ever ſince made any on that part of the continent, except at St. Mattheo, and St. Auguſtin.

But it is farther worth obſerving, that this country was called Carolina, by king Charles I. on a grant which he made of it to Sir Robert Heath, his attorney general, the country being

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not then poſſeſſed by a Chriſtian power. Sir Robert conveyed Carolina to the earl of Arundel, who was at the expence of planting ſeveral parts of it, and would have effected much more, had he not been hindered by the war with Scotland, and afterwards by the civil wars in England. It likewiſe appears from the memorial above-mentioned, that the Five Nations in the territory of New York, whom the French commonly call Iroquois, who have for about ninety years voluntarily ſubjected themſelves to the crown of England, and who had conquered all the country from their own habitations to the Miſſiſippi river, and even beyond it, made a ſale and ſurrender of their conqueſts and acquiſitions to the government of New York; which is another proof of their being the property of the Engliſh.

The memorial we are ſpeaking of, was preſented to king William, by the late Dr. Coxe, who by conveyances from one to another, after the death of the earl of Arundel, became proprietor of Carolina; and who ſets forth, that at the expence of ſeveral thouſand pounds, he diſcovered divers parts of it, firſt from Carolina, and afterwards from Penſylvania. The ſon of this memorialiſt, Daniel Cox, Eſq; who himſelf reſided fourteen years in America, has publiſhed a particular deſcription of this province of Carolina, giving an account of the animals, metals, vegetables, &c. And as he compoſed it chiefly from memoirs drawn by his father from ſeveral journals and iteneraries of the Engliſh,

Engliſh, and from the relations of other travellers and Indian traders of good underſtanding and probity, who had paſſed through the heart of the country, we think we may venture to rely upon his authority in what we ſhall have occaſion to ſay concerning it.

As to the natives of Florida, authors tell us that both ſexes go naked, except a piece of deer-ſkin round their waiſts. Their legs and arms are painted with various figures, which are indelible; and they anoint their ſkin with a ſort of oil, which hardens them againſt the heat of the ſun. They have long black hair, which they have a method of combing, curling, and twiſting about their heads, ſo that it looks very agreeable. They are very dexterous, in managing their weapons, which are bows and arrows, the latter pointed with ſharp ſtones or fiſh-bones. The women are remarkably graceful and well-ſhaped, and not only perform all domeſtic offices, but accompany their huſbands either to hunting or to war; on which occaſion it is ſaid they will ſwim over large rivers with their children on their backs. Their corn is laid up in common granaries, and diſtributed out to every family according to its number. Their uſual drink is water, but they are likewiſe fond of a liquor they call caſſina, which they drink as we do tea: it is the infuſion of the leaves of a tree much valued, not only by them but by the Spaniards, for its diuretic quality.

Moſt of them are bigotted idolaters, worſhipping the ſun and moon, and have a great averſion to Chriſtianity. They are ſubmiſſive enough to their chiefs or heads of clans, who are called Paraouſti's, and are the commanders in time of war, and preſidents of their councils in time of peace. Their prieſts, whom they call Jaouna's, have a great influence over them, who wear long robes made of ſkin, always look grave, and live very abſtemiouſly. As prieſts, they pray and ſacrifice to the ſun; as magicians, they pretend to foretel future events, ſuch as the ſucceſs of their expeditions; and, as phyſicians, they bleed, vomit, and ſweat the ſick, till they either kill them or work a cure.

As to the Britiſh empire on the American continent, is chiefly lies along the ſea-coaſt, and conſiſts of Canada, New Scotland, New York, New Jerſey, Penſylvania, Maryland, Virginia, North and South Carolino, Florida, and Georgia. We ſhall not attempt to give the hiſtory of theſe ſettlements, as it may be thought that we have already wandered too far from our ſubject; but ſhall only take ſome notice of the Indians bordering upon our colonies, and then proceed to the curioſities of the northern part of America. The Indians of Carolina, Virginia, Maryland, and Penſylvania, ſeem to believe in one God, the creator of all things, who is infinitely happy in himſelf, but has little or no concern with the affairs of mankind, having committed the government of the world to certain inferior deities or demons, to whom therefore

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the natives pay their devotions. They have a great regard to their prieſts or conjurers, as they may be called, and believe there will be a future diſtribution of rewards and puniſhments according to their behaviour in this life. The Indians about Penſylvania believe a God, and the immortality of the ſoul; for they ſay there is a great king that made them, who lives in a glorious country to the ſouthward, and that the ſouls of the good ſhall go thither. The other Indians of the more northern colonies, as far as we can learn, likewiſe acknowledge a Seprume Being, but ſeldom pay any religious worſhip to him, unleſs in public calamities, and then they offer ſacrifices of every thing they poſſeſs, and pray for deliverance from their miſery; they alſo offer thank-offerings for public bleſſings. When it thunders, they take it to be a ſign of God's diſpleaſure, and will ſay to one another, 'How angry he is!' They believe a future ſtate of rewards and puniſhments, but they have very obſcure notions of it, and ſeem to think that the rewards of the good will conſiſt in the enjoyment of thoſe pleaſures they were fond of in this world.

With reſpect to the reſt of their character, it may be ſaid in general, and more eſpecially of the Indians of Carolina, Virginia, Maryland, and Penſylvania, that they are a good-natured, generous people, very humane to ſtrangers, but revengeful and implacable when provoked. They are quick of apprehenſion, and gay of temper, feaſting and dancing almoſt perpetually.

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Their public conferences ſhew them to be men of genius, and that they have a natural eloquence, without the help of letters or education; inſomuch that a perſon muſt be wiſe indeed who outwits them in any treaty about a thing they underſtand. They are in general a manly, well-ſhaped race, tall, ſtrait, nimble, and indefatigable in their warlike expeditions, hunting, and journeys. They moſtly walk with a lofty chin; and take pains to darken their complexions by greaſing themſelves with bear's fat clarified, and expoſing themſelves to the ſun from their infancy. They are a very healthy people, having hardly any diſeaſes amongſt them, except the ſmall-pox, and thoſe occaſioned by drinking of rum and other ſtrong liquors, of which they are become great lovers ſince the Europeans came amongſt them. When they have any diſtemper, they are very impatient till cured, and will give any thing for that purpoſe, eſpecially for the recovery of their children, to whom they are extremely indulgent. But, after all we can ſay on this head, we are liable to uncertainty, their characters being given us variouſly by different writers.

SECT.

SCET. II.

A particular Account of the moſt curious natural Productions of North America, *in the Animal, Vegetable, and Foſſil Kingdoms; of remarkable Mountains, meaicinal and other ſingular Springs; and of Rivers, Cataracts, and other natural Objects of Curioſity.*

ANIMALS.

AMONG the moſt remarkable animals of North America is the mooſe dear, which is thought peculiar to that part of the world, and is one of the nobleſt creatures of the foreſt. Theſe deer are found no where in greater numbers than in New England; and we are informed, that there are two ſorts of them, the common light grey, and the large or black mooſe. The former, which the Indians call Wampooſe, are more like the ordinary deer, ſpring like them, and herd ſometimes to the number of thirty together. The black mooſe, whoſe hair is dark grey, is ſhaped much like the common deer, parts the hoof, chews the cud, and has no gall: his ears are large and erect, and he has a very ſhort bob tail. Theſe deer are not ſo gregarious, not above four or five being found together. The hunters in New England have taken a buck

or ſtag mooſe of the black kind, ten feet and a half high, from the withers; and a quarter of this veniſon has weighed upwards of 200 pounds. A black mooſe doe or hind of the fourth year was killed near Boſton, which from the noſe to the tail, meaſured between ten and eleven feet, and was ſix feet eleven inches high. The horns of the mooſe, when full grown, are between four and five feet from the head to the tip, each horn having ſeven ſhoots or branches, and they generally ſpread about ſix feet. When the horns, which are ſhed every year, firſt come out of the head, they are round like thoſe of an ox, but about a foot from the head they begin to grow a palm broad, and higher up ſtill broader, ſo that the Indians make ladles of them that will hold a pint. When a mooſe goes through a thicket, or under the boughs of trees, he lays his horns back on his neck, not only that he may make his way the eaſier, but to prevent his being ſcratched or hurt by the wood. A mooſe does not ſpring or riſe in going, as a common deer, but rather ſhoves along ſide-ways; and when he is unharboured, he will run a courſe of twenty or thirty miles before he turns about or comes to a bay. He is not ſo ſwift as the common deer, but will run longer; and when he is chaſed he uſually takes to the water. One of theſe large black mooſes has been ſeen, in his common walking, to ſtep over a gate or fence five feet high.

The fleſh of the mooſe is excellent food, and though it be not ſo delicious as common veniſon, it is more ſubſtantial, and will bear ſalting.

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The noſe of the animal in particular is reckoned a great dainty; and Mr. Dubley, who eat ſeveral of them, ſays he found them to be perfect marrow. The ſkin of the mooſe well dreſſed, makes excellent buff, and the Indians make their ſhoes of this ſkin for travelling in the ſnow. Their way of dreſſing it is this: after they have haired and grained the hide, they make a lather of the mooſe's brains in warm water; and after they have ſoaked the hide for ſome time, they ſtretch and ſupple it. Nor is the fleſh and ſkin of the black mooſe the only parts of it that are ſerviceable, for even the hair on the ridge of his back, which is ten or twelve inches long, is made into good belts by the indians. A mooſe generally brings forth two young ones, which it is ſaid to do ſtanding, and the young fall from the dam upon their feet.

Theſe creatures being very tall, and having ſhort necks, do not graze on the ground like the common deer, horſes, cows, &c. and if at any time they eat graſs, it is the top of that which grows very tall, or on the ſide of a riſing ground. In the ſummer they feed on plants, herbs, and young ſhrubs that grow on the land, but are moſt fond of water-plants, eſpecially a ſort of wild colts-foot and lily, which abounds in ponds, and by the ſides of the rivers. For this food the mooſe will wade far and deep; and it is by the noiſe they make in the water that the hunters often diſcover them. In the winter they live by brouzing on the tops of buſhes and young trees; and being very ſtrong, as

well as tall, they will bend down a tree as thick as a man's leg. When the brouze fails them they will eat off the bark of ſome ſorts of trees as high as they can reach. They generally feed in the night, and lie ſtill in the day.

The Mexican muſk-hog, ſo called from its ſcent, is a remarkable animal, found not only in New Spain, but in ſeveral other parts of the American continent. Dr. Tyſon had one which he had the curioſity to diſſect, and he deſcribes it as much leſs than our common hogs; for from the end of the body where the tail ſhould be, if it had one, to the top of the head between the ears, it meaſured only two feet two inches, and from thence to the extremity of the ſnout eleven inches long. The compaſs of the body was two feet, that of the neck ſixteen inches, of the head in the largeſt place eighteen inches, and of the ſnout twelve inches; for the lower jaw of this hog was more protuberant, and the head leſs tapering than in our ſwine. Its body was of a grizzly colour, and beſet with briſtles, which were thicker than thoſe of a hog, yet ſmaller than thoſe of a hedge-hog, but reſembling them, or the quills of a porcupine, and variegated with rings of black and white. The belly was almoſt bare, and the briſtles on the ſides were ſhort, but gradually increaſed in length as they approached the ridge of the back, where ſome were five inches long. On the head between the ears there was a large tuft of theſe briſtles, which were moſtly black. The ears were about two inches and a half long, and

pricking

pricking up; and the eyes, like thoſe of pigs, were ſmall. The ſnout was like that of a hog, but the mouth ſmall; and one ſide of the lower lip was made ſmooth by the rubbing of the tuſk in the upper jaw. The feet and claws were perfectly like thoſe of common hogs. It had no tail, as was intimated above; but its greateſt peculiarity, and what diſtinguiſhes it from any other animal, is the navel, or rather foramen, on the hinder part of the back. Theſe animals are uſually found in the woods and mountains, and go in herds together. They feed on roots, acorns, and fruits; but as the greateſt dainty, they hunt after all manner of ſerpents and toads, and having caught them, they hold them with their fore feet, and with a great deal of dexteriy, ſtrip off the ſkin with their teeth from the head to the tail, and then greedily devour them. As an antidote againſt the poiſon, they are ſaid to eat the bark of a certain tree; and by this ſort of food they thrive and become fat. They are naturally very fierce; and if one of them be wounded, he preſently gets to his aſſiſtance a great number of his kind, and never deſiſts till he is ſlain or has revenged the injury. They are always at enmity with the tigers, and often the body of a tiger, and ſeveral of theſe hogs, are found dead together. If they ſpy a man, they will attack him fiercely, and his beſt refuge is to get up a tree, which they will aſſalt with their teeth; nor will they eaſily leave him till they are called off by hunger. When they are hunted they often tear the dogs to pieces.

Their fleſh is eſteemed very good, and is much coveted by the natives.

The beavers, according to accounts of travellers, obſerve a wonderful polity, and their manner of living and building their habitations ſhews an extraordinary inſtinct implanted in them by the great Author of nature. In order to raiſe themſelves a convenient abode, they chuſe a low level ground, watered with a ſmall rivulet, where, by making dams acroſs it, they can form a reſervoir of water, and overflow the ground. Theſe dams or cauſeys are formed by thruſting down ſtakes five or ſix feet long, and as thick as a man's arm, deep into the earth; and theſe they wattle acroſs with tender pliable boughs, and fill up the ſpaces with clay, making a ſlope on the ſide againſt which the water preſſes, and leaving the other perpendicular. One of theſe dikes may be ten or twelve feet thick at the foundation, and they raiſe it in height proportionably to the water's elevation and plenty. As they are ſenſible that materials for building are not ſo eaſily tranſported by land as by water, they take the opportunity of ſwimming, whenever they can, with clay placed on their tails, and ſtakes of wood between their teeth, to every place where thoſe materials are wanted. If the violence of the water, or the footſteps of the hunters who paſs over the work, ſhould damage it in any degree, they immediately viſit all the edifice, and with indefatigable application repair and adjuſt whatever they find out of order: but if they are too frequently

diſturbed

diſturbed by the hunters, they only work in the night, or elſe diſcontinue their labours.

When the beavers have compleated their cauſey or dike, they begin to form their cells, which are round or oval apartments, divided into three partitions or ſtories, raiſed one above another. The firſt is ſunk below the level of the dike, and is generally full of water; the other two are formed above it. The walls of theſe houſes are upright, and about two feet thick; and they are always built in ſtories, that in caſe the water riſes, the beavers may retire to a higher ſituation. The materials are the ſame as they uſe for the dike: and as their teeth ſupply the place of ſaws, they cut off all projections that ſhoot out from the ſtakes, beyond the perpendicular of the wall; after which, they work up a mixture of clay and dry graſs into a kind of mortar, and by means of their tails, they lay it over the building, both within and without. They likewiſe drive ſtakes into the earth to fortify the ſtructure againſt the winds and water; and at the bottom they ſtrike out two openings to the ſtream, one of which leads to the place where they bathe, and the other is a paſſage to that quarter where they carry out every thing that would ſoil or rot the upper apartments. There is a third aperture much higher, calculated to prevent their being ſhut up when the ice hath cloſed the openings into the lower lodgments. The dimenſions of their houſes are proportioned to the number of their intended inhabitants, twelve feet in length and

ten

ten in breadth, being found ſufficient for eight or ten beavers; and if the number encreaſes, they enlarge the building accordingly. It has been aſſerted for truth, that there have been found above four hundred of theſe creatures in different apartments communicating with one another; but theſe populous ſocieties are very rare, becauſe they are too unmanageable, and the beavers are generally better acquainted with their own intereſts. They aſſociate to the number of ten or twelve, and ſometimes a few more, and ſo paſs the winter together in a very agreeable manner.

There are ſome beavers called terriers, which burrow in the earth, beginning their hole at ſuch a depth under water as they are ſenſible it will not freeze at; and this they carry on for five or ſix feet, juſt big enough for them to creep through. Then they make a bathing-place three or four feet ſquare, from whence they continue the burrow, always aſcending by ſtories, that they may lodge dry, as the water riſes. Some of theſe burrows have been found to be a hundred feet in length.

This is Dr. Sarraſin's account of the terriers, but others ſay they begin their burrow on the land, and having dug downwards to a proper depth, they then dig horizontally till they come to the water.

The beavers of Canada have generally compleated all their works in Auguſt or September, after

after which they furniſh themſelves with proviſions for the winter. During the ſummer, they regale themſelves with all the fruits, plants, and roots the country produces; but againſt winter, they lay up a ſtock of wood, which they feed upon, after ſteeping it in water, and this in quantities, proportionable to their neceſſary conſumption. They gnaw off twigs and branches from the trees, of which the large ones are conveyed to the magazine by ſeveral beavers, and the ſmaller by a ſingle one; and it is obſerved, that they take different ways, each having his walk aſſigned him, that they may not interrupt one another in their labour. The dimenſions of their pile of wood are regulated in proportion to their numbers, and we are told, that one of twenty-five or thirty feet ſquare, and eight or ten feet high, is the uſual proviſion for eight or ten beavers. When the wood is ſoaked in water, they gnaw it into ſmall pieces, and convey it to their cells, where it is regularly divided amongſt them. Sometimes they expatiate in the woods, and regale themſelves and their young with a freſh collation; for they love green wood better than that which is old and withered: and the hunters, ſenſible of this, place a parcel of the former about their habitations, and then have ſeveral devices to enſnare them. When the winter is ſevere, and the water frozen over, the hunters ſometimes break the ice, and when the beavers come to the opening, for the benefit of the freſh air, they kill them with hatchets; or elſe they cover the aperture with a ſtrong net, and then overturn their

lodge,

lodge, upon which the poor animals thinking to eſcape, by betaking themſelves to the water, and emerging at the hole in the ice, fall into the ſnare, and are taken.

There is another animal, common enough in ſeveral parts of America, called a muſk-rat, which is exactly ſhaped like our water-rat, only ſomewhat larger. Theſe creatures build houſes as the beavers do, in marſhes, by the water-ſide, with two or three ways to them; and the inſide of them is neatly plaiſtered. They conſiſt of three ſtories, ſo that the rats aſcend from one into the other, as the water riſes. In ſhort, they are, in all reſpects, beavers in minature, and therefore any farther account of them is unneceſſary.

In North-America, we meet with ſeveral kinds of ſquirrels, particularly one called the ground-ſquirrel, which is a little larger than a mouſe, and is finely ſpotted like a young fawn. It is a ſort of dormouſe, only different in colour.

Thoſe called fox-ſquirrels, which are much larger than the Engliſh ſquirrels, are very numerous in Virginia. They are almoſt as grey as a common rabbet, and are reckoned as good food.

But one of the greateſt curioſities in Virginia, though it cannot be ſaid to be peculiar to that country, is the flying ſquirrel, ſo called from its being

The Flying Squirrel.

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being provided with a ſkin that can be expanded from each ſide, like a ſail, and greatly aſſiſts it in leaping from one bough to another; inſomuch, that though it is ſmaller than the fox-ſquirrel, and even than the leaſt of our ſquirrels in England, it can jump much farther. M. Klein tells us, that in the year 1727, two of theſe flying ſquirrels were brought alive to Warſaw, and preſented to Auguſtus II. king of Poland; and in the year 1728, M. Klein had one of theſe ſquirrels given him, which was taken in the woods, on the confines of Ruſſia, and was much leſs than the common ſquirrel. Its ſkin was very ſoft, of a beautiful dark-grey colour, and its eyes were large, black, and prominent. It had ſmall ears, and very ſharp teeth; but, though moſt of them are miſchievous enough, this was pretty gentle, and would not bite, unleſs it was provoked. They fed it with bread baked without ſalt, but the freſh tops of birch were its favourite food, it neither caring for nuts or almonds. The little creature made its bed in an elegant manner, of the moſs of the birch, in which it would lie buried, as it were and not ſtir from thence in the day-time, unleſs diſturbed or thirſty. As to the membrane, which may be called its flying inſtrument, it might be expanded from each ſide about the breadth of a palm, and adhered to the bending of the hinder feet, but was connected with the fore feet by a bony articulation. Upon the whole, M. Klein concludes, that this animal does not properly fly, but that it can leap from place to

place, with greater eaſe than other ſquirrels, and by means of its ſails continue longer in the air.

The conſideration of the flying ſquirrel naturally leads us to take a view of ſome of the feathered race, whom nature has furniſhed with wings, that enable them to expatiate in the air, that is, to fly, in the true and proper meaning of the word. Of all this tribe, here is none more deſervedly admired than that curious and beautiful little animal, called the humming-bird, of which there are ſeveral ſpecies, to be met with in moſt parts of the American continent, as well as in many of its iſlands. The ſmalleſt ſort of humming-birds, according to Mr. Smith, is conſiderably leſs than a wren: and according to all accounts, it is the leaſt bird in the world. Mr. Hamerſly, in *Phil. Tranſ.* No. 200, tells us, that the leg and foot together, are about half an inch, and the whole body not quite an inch in length. Upon weighing one as ſoon as it was killed, it was found to be only the tenth part of an ounce avoirdupois, which is much about the weight of a ſixpence; whereas a titmouſe, the ſmalleſt bird in England, weighed above two ſhillings. The ſame gentleman tells us, that its eggs are about the bigneſs of a pea; and Mr. Winthorp, who weighed two of them, found one to be about five grains, and the other only three and a half. As to its colours, they are various, and ſurprizingly beautiful, though the bird is differently deſcribed by different authors. De Laet repreſents it as having all the colours of the rainbow, the ends of the wings being

being of a golden colour, as alſo its belly; the ſides green as an emerald, with a green tuft of feathers on its crown, a circle round its neck as red as a carbuncle, the bill and legs as black as jet, and the eyes like diamonds. Mr. Smith ſays, its colour is like that of a peacocks neck, in that part where the black ground is finely ornamented with a gliſtening greeniſh blue; and Mr. Hamerſly deſcribes it to be of a ſhining green colour, ſomewhat reſembling the head of an Engliſh drake.

But though authors differ a little in their deſcriptions of the humming-bird, all agree that its plumage is extremely beautiful.

It is natural to ſuppoſe this little creature obtained its name from the humming noiſe it makes in its flight, almoſt like that of a ſpinning-wheel, occaſioned by the ſwift motion of its wings; and yet Mr. Hamerſly ſays, he never obſerved any ſuch thing. It is a ſolitary bird, no more than two being ſeen together at a time, viz. the male and female; and they are eaſily diſtinguiſhable, the former being ſomewhat bigger than the latter. They feed by thruſting their ſlender bill and tongue into the bloſſoms of trees and other flowers, from whence, like bees, they extract the ſweet juices; and this they do upon the wing, hovering over the flower without perching. They can fly very ſwiftly; and Mr. Smith tells us, he has known one of them give chace to a hawk, though he imagines the diminutive ſize and agility of the bird were

its only protection. Some writers however, repreſent the humming-bird as formidable to the hawk on account of his ſharp bill, which is as fine as a needle, and with which he pierces the ſides of his enemy, clinging faſt to him with his little talons: but this we apprehend is fabulous.

The neſt of the humming-bird is curiouſly contrived, being made of cotton-wool, in form and bigneſs, like the thumb of a man's glove, and uſually built at the extremity of the branches of the tamarind, or other trees. Theſe birds are ſeldom ſeen on the ground, but fly about the gardens, from one flower to another. They are ſeen only in ſummer, and are very difficult to keep alive for want of their natural food; though Mr. Clayton ſays, they have been kept and fed with water and ſugar.

The next curioſity among the feathered inhabitants of North-America, may be reckoncd the mocking-bird, ſo called from its imitating the notes of all other birds, which, with the many charming ones of his own, make him accounted the fineſt finging-bird in the world. There are two ſorts of them, the grey and the red, both about the ſize of a thruſh; but the former is moſt eſteemed, as having the ſofter note. Its feathers are much of the colour of our grey plovers, with white in the wings like a magpye; and its poſture in flying are very odd, ſometimes with its tail upright and its head down, and ſometimes the contrary. It is a briſk bold

bold bird, and yet ſeems to be of a tender conſtitution, neither ſinging in winter, nor in the middle of ſummer, and with much difficulty are any of them brought to live in England. It ſings not only by day, but alſo at all hours of the night, on the tops of chimnies.

There are two ſorts of Virginia nightingales, or red birds, the one with a tuft on his head, and the other quite ſmooth-feathered. The cocks of both ſpecies are of a pure ſcarlet, and the hens of a duſkiſh rend.

In the ſame country, they have a bird called a blue bird, being of a beautiful azure colour, and about the bigneſs of a chaffinch; and they have ſeveral ſorts of goldfinches, finely variegated with red, orange, and yellow feathers.

There is another birds, very injurious to corn, called a black-bird, being as black as a crow, only ſome of them have ſcarlet feathers in the pinions of their wings. They ſeem to be a ſort of ſtarlings, for they cry like them, but do not ſing, and are much of the ſame bigneſs.

The jay of Virginia is leſs than our Engliſh jay, and the body of it is blue, whereas ours is brown. Its wings are curiouſly marbled, as thoſe of ours are; and it has the ſame cry, and ſudden jetting motion.

In their woodpeckers, there is great variety; one ſpecies of them is as big as a magpye, with

blackiſh brown feathers, and a large ſcarlet tuft on the top of the head; beſides which, there are four or five ſorts more, ſome with green, yellow, and red heads, and others ſpotted red and white in a very beautiful manner.

In Virginia, Mr. Clayton informs us, there are three ſorts of eagles; the largeſt of which they call the grey eagle, being much of the colour of our kite or glead: the ſecond is the bald eagle, ſo called becauſe the body and part of the neck and head are only covered with a whitiſh ſort of down; and the third is the black eagle, much reſembling thoſe of our own iſland. Theſe build their neſts on the top of ſome tall old tree, ſtripped of its boughs, and near the ſide of a river; and the people uſually fell the tree when they take the young. When the eagle obſerves that the fiſhing-hawk hath ſtruck a fiſh, he takes wing immediately, and purſues the hawk, which chace affords the ſpectator an agreeable entertainment; for as ſoon as the hawk perceives himſelf purſued, he ſcreams, and makes a terrible noiſe, till at length, in order to ſave himſelf, he drops the fiſh, which the eagle frequently catches before it reaches the earth or water. Theſe eagles kill young lambs, pigs, &c.

Their wild turkeys are remarkable for their ſize, ſome of them weighing fifty or threeſcore pounds. Their legs are very long, and they run exceeding ſwiftly. Their feathers are of a

blackiſh

blackiſh ſhining colour, reſembling thoſe of a dove's neck, when viewed in the ſunſhine.

They have alſo ſeveral ſorts of herons, one larger than the Engliſh, and feathered like a gooſe; and there is another ſpecies which come only in ſummer, and are milk white, with beautiful red legs.

Beſides the rattle-ſnake, of which we have ſpoken ſufficiently already, they have one called the blowing ſnake, which is a ſort of viper, and has its name from its blowing and diſtending its head before it bites. Its poiſon, without a ſpeedy remedy, is mortal; and there is another dangerous kind of ſnake, called the red ſnake, being of a dark-brown colour, inclining to red. Their bellies are of a duſky white, with a ſtreak of red on each ſide.

The horn-ſnake is another remarkable ſpecies, ſo called from a horn on its head, with which it gives a wound as mortal as the bite of the rattle-ſnake.

That called the corn-ſnake, from its being frequently found in corn-fields, is much like the rattle-ſnake in colour, but the chequers are not ſo regular, nor is its bite venomous.

Amongſt the curious animals of North-America, we may reckon the little inſect which affords that valuable drug called cochineal, of

great uſe in dying crimſons and ſcarlets, and eſteemed in medicine as a cardiac and alexipharmic. Naturaliſts have been ſtrangely divided with reſpect to the origin of cochineal, ſome referring it to the vegetable, and others to the animal kingdom; to which laſt it is now proved to belong by inconteſtible evidence: for a diſpute ariſing between Melchior de la Ruuſcher and a friend of his on this ſubject, the former procured from Antequera in New Spain, the place where there is the greateſt trade for this drug, the atteſtations upon oath of eight perſons, who had been for many years immediately employed in managing and propagating cochineal, from whence we learn the following particulars. Firſt, that they are ſmall animals, with a beak, eyes, feet, and claws; that they creep, climb, ſeek their food, and bring forth young, without that transformation, obſervable in ſilk worms, and other inſects. When they firſt begin to move, they are no larger than nits, or ſmall mites, or the point of a needle, but when come to maturity, they reſemble a dog's tick, both in ſize and figure. Thus far is certain, but the manner of their generation is doubtful; though it is commonly believed by thoſe who cultivate them, that they are impregnated by a ſmall butterfly, which is bred upon the nopal, the plant they feed upon, and which is obſerved to paſs and repaſs over them frequently.

When theſe little animals can bear the open air, which is early in the ſpring, they ſoon grow large

large enough to produce young ones; at which time, they put twelve or fourteen together, into a paſtle, or little neſt, made of fine ſoft hay or ſtraw, or the moſs of trees, or the down that immediately encompaſſes the cocoa-nut. Theſe neſts are placed upon the nopal, or prickly Indian fig-tree, which is carefully cultivated for this purpoſe; and in three or four days, a great many young ones are produced, after which, the old ones die. The young ones coming out of their neſt, climb up the nopal, fix themſelves to it, and ſuck its juice, which is their only nouriſhment, for they do not eat the plant; and therefore they ſeek out thoſe parts of it that are greeneſt and fulleſt of juice, taking care to place themſelves ſo as to be ſcreened from the wind and weather. During this time, whilſt they are growing up, and become pregnant, great care is taken that no vermin incommode or kill them, and alſo to keep them clean, and diſengage them from certain threads like cobwebs, that grow upon the nopal. They are likewiſe to be ſheltered f om too much heat or cold, and from the rain and wind, for the fineſt of theſe inſects are very tender. The wild ſort, indeed, bear all theſe inconveniencies; but then they are gritty, of an ill ſmell, and of little value.

As to the gathering of cochineal, they firſt take the females, which die in their neſts, after having brought forth their young; and three or four months after this, as the ſeaſon permits, when the firſt young ones are become large enough to bring forth, and have produced ſome few,

few, the Indians carefully gather them off the nopal, with a ſmall bruſh, like a pencil. Being thus collected, the little creatures are killed by hot water or fire, and are called the ſecond gathering, or rather the firſt of the young ones that have been nouriſhed and raiſed in the open air. In three or four months more, they gather the ſecond brood of thoſe that have been brought forth upon the nopal, and have likewiſe produced ſome young ones; which is done much in the ſame manner as before, only now they take from the plant a great many young ones, with their parent inſects; and from the number of ſmall ones, found amongſt this gathering of cochineal, it is called granilla. In the mean time, they keep a number of theſe young ones alive upon the nopals, which they pluck up, or cut down, and take them into their houſes, in order to nouriſh the inſects, during the rainy ſeaſon. Laſtly, when theſe are grown large, they put them into the paſtles, and proceed in the manner above related; ſo that they uſually make three gatherings in a year.

They have two ways of killing theſe inſects, either in hot water, or in little ovens, made for that purpoſe; and ſome people kill them by roaſting them upon flat ſtoves with fire under them, ſuch as the Indian women uſe to bake their bread. Theſe three different methods give the cochineal three different colours. The firſt makes it of a brown red, the hot water taking off the whiteneſs that covers the inſect when alive. The ſecond makes them of an

aſh-colour, and marbled; and the third makes them black, as if they had been burnt.

Of the old ones, that die after bringing forth their young, four pounds, when dried, produce but one; or rather one pound is reduced to four ounces: but three pounds only of the living ones, that have been carefully taken off the nopals, being killed and dried, produce the ſame quantity.

This is the ſubſtance of the atteſtations abovementioned, which contain ſeveral circumſtances before unknown in Europe; and hence the curious may be aſſured of the truth of a thing, which for many years, was a matter of uncertainty, and underſtood only ſuperficially by thoſe who allowed that cochineal was really little amimals. That there may always be a ſtanding proof of theſe facts, the original atteſtations, confirmed by the certificates of three magiſtrates, and three public notaries, are depoſited among the regiſters of the Royal Society.

However, it ſeems proper to obſerve, that though cochineal is now known to be produced by an animal, there is a berry growing in America, which yields a dye almoſt as beautiful as that of the inſect. The firſt ſhoots of the tree produce a yellow flower, then comes the fruit, which is long, and opens when ripe, with a cleft of three or four inches. This fruit is full of kernels or grains, which fall on the leaſt agitation,

tion, and are carefully gathered by the Indians. Eight or ten of theſe fruits will yield about an ounce of grain; and a perſon may eaſily take it for the animal cochineal, but this laſt is much the moſt eſteemed.

Let us now take a view of ſome of the inhabitants of the waters, both of the ſeas and rivers, belonging to the northern part of the American continent: and amongſt theſe we ſhall ſcarce find any more remarkable, than an animal deſcribed by Mr. Glover, in his account of Virginia, publiſhed in the Philoſophical Tranſactions. This gentleman tells us, that in the river Rapahannock, he ſaw a ſtrange creature, much reſembling a man, but ſomewhat larger, ſtanding upright, with his head, neck, ſhoulders, breaſt and waiſt above water. His ſkin was tawny, much like that of an Indian; the figure of his head was pyramidal, without hair; his eyes large and black, as were alſo his eyebrows; his mouth was very wide, with a broad black ſtreak on his upper lip, turned upwards like muſtachoes; and his countenance was grim and terrible. His neck, ſhoulders, arms, breaſt, and waiſt, were like thoſe of a man; but his hands, if he had any, were under water. He ſeemed to ſtand with his eyes fixed for ſome time on Mr. Glover, and then plunged down, riſing again ſoon after at a ſomewhat farther diſtance. He then turned his head again towards our author, and ſinking a little under water, he ſwam ſo near the ſurface, that Mr. Glover could obſerve him throw out his arms, and gather them in, as a man

man does in ſwimming. At laſt, he plunged his head downwards, by which means, his tail appeared above water, which exactly reſembled that of a fiſh, with a broad fin at the end of it.

There are ſeveral ſorts of whales on this coaſt, of which the moſt remarkable are the true whale, or that which yields the whalebone, and another which furniſhes us with the ſpermaceti. The whalebone whale is ſixty or ſeventy feet long, for theſe are not ſo large as thoſe of Greenland, and very bulky, having no ſcales, but a ſoft ſmooth ſkin, and no fins, except one on each ſide, from ſix to eight feet in length, which they are not obſerved to uſe, unleſs in turning themſelves, and while they are young, and are carried by their dam on the flukes of their tails; for then with thoſe fins, they claſp themſelves round about her, otherwiſe they would be in danger of falling off. This fiſh, when firſt brought forth, is about twenty feet long, and of little value, but then the dam is exceeding fat. At a year old, when they are called ſhort-heads, they are very fat, ſo as to yield about fifty barrels of oil; but by that time the dam is very poor, and will not yield above thirty barrels, though of a large ſize. When two years old, they are called ſtunts, being ſtunted after weaning, and then generally yield from twenty-four to twenty-eight barrels. After this, they are called ſcull-fiſh, their age not being known, but only gueſſed at, by the length of the bone in their mouths. This grows on each ſide of the upper jaw, and is

ſome-

times ſix or ſeven feet in length. A good large whale has yielded a thouſand weight of bone, a hundred and thirty barrels of oil, and near twenty out of the tongue alone.

The whale producing ſpermaceti, is much of the ſame dimenſions with the former, but is of a greyiſh colour, whereas the others are black. He has a bunch on his back, as big as a man's head, and is diſtinguiſhed from the former kind of whale, by having no whalebone in his mouth, inſtead of which, there are rows of fine white teeth in each jaw, five or ſix inches long. Our author ſent the Royal Society one of theſe teeth, taken from a whale forty-nine feet long, and whoſe head yielded twelve barrels of ſpermaceti oil. Theſe are more gentle than the other ſpecies of whales, and ſeldom fight with their tails, but, when ſtruck, uſually turn upon their backs, and fight with their mouths. The oil made of the body of this fiſh, is much clearer and ſweeter than that of other whales.

Before we diſmiſs this ſubject, it ſeems proper to add Mr. Smith's account of the ſword-fiſh and thraſher, two allied enemies of the grampus, a ſpecies of whale frequenting the ſeas of North America. He ſays, he has often been an eye-witneſs of the battles between theſe allies and their common enemy the grampus, who as naturally encounter each other when they meet at ſea, as the elephant and rhinoceros do at land. The ſword-fiſh gets underneath the grampus, and pricks him in the belly, till he

riſes

riſes to the ſurface of the water; and then the thraſher mounts his back, and beats him ſharply with his tail. Our author was once within leſs than a hundred yards of a fight between theſe creatures, and aſſures us they cauſed the ſpray of the ſea to fly up very violently all round them; but, to the beſt of his diſcernment, the thraſher ſeemed to fight with a weapon about three yards long, like a monſtrous broad ſword, iſſuing from his noſe, and not with his tail, as is commonly reported.

The mention of theſe fiſhes, which are in a perpetual ſtate of war, with each other, puts us in mind of the dolphin and flying-fiſh, which are common in the American ſeas, and indeed in many parts of the Atlantic Ocean. The flying-fiſh, according to Sir Hans Sloane, is of the herring-kind; but Mr Smith deſcribes it as ſomewhat longer than a herring, and ſomewhat thicker and rounder in body. It has a fin on each ſide cloſe to the gills, about four inches long, being broadeſt as well as a little rounded at the extremity. When theſe fiſhes are chaſed by a dolphin, or other fiſh of prey, they evade the purſuit by flying out of the water; and this flight they continue ſo long as their fins keep wet enough, which is perhaps for thirty or forty yards, and uſually in a ſtrait line. They move their fins as nimbly as bees do their wings, ſo as ſcarce to be perceived; and as they are of a very bright ſhining colour, they look exactly like ſo many pieces of poliſhed ſilver darting through the air. Their ſight, Mr. Smith ſuppoſes, is

not extraordinary good when they are out of the water, becauſe two or three of them fell upon the ſhip he was on board of, in which caſe they are utterly diſabled from riſing again; but why might not this proceed from their fins growing dry, and rendering them incapable of flying any farther? Our author adds, that theſe fiſhes either fly ſingly, or in flocks like birds; and far oftener, he believes, out of wantonneſs than fear.

The dolphin, according to the ſame naturaliſt, is a very ſtrait-bodied fiſh, and not that crooked animal he is uſually repreſented by painters. His head indeed is exactly the ſame as it is drawn in pictures and on ſigns; but, being thickeſt at the gills, his body grows gradually taperer quite down to the tail, from the extremity of which to the end of the noſe is commonly about four feet. He is a fiſh of prey, as we have juſt now hinted, and ſwims very ſwiftly, inſomuch that we are told he keeps pace with the flying-fiſh, and often catches them juſt as they drop into the water, after they have taken a long flight to eſcape his jaws. In order to catch the dolphin, Mr. Smith ſays, they faſten the feather-ends of two gooſe-quills to a hook, one on each ſide; and this being tied to a line, not much thicker than whipchord, is drawn after the ſhip's ſtern when the wind does not blow too freſh, making a ſmall rippling on the ſurface of the ſea, like a flying-fiſh juſt riſing out of the water, which deceives the dolphin, who ſeizes the hook and feathers, and is taken.

The

The colours of the dolphin are extremely beautiful, his head being of the moſt lively azure blue, as is likewiſe his body from the back-fin to the middle of each ſide, with ſome intermixture of green, and ſtrewed with bright ſpots of gold, ſcarlet, &c. From hence quite down to his belly his ſkin is the colour of the faireſt beaten gold, but, in our author's opinion, far ſurpaſſing it in beauty, and a ſight worthy the attention of the greateſt monarch. About three minutes after he is taken out of the water, his glorious colours grow faint and fading, and then preſently return and vaniſh again as quick as thought itſelf. In ſhort, ſays Mr. Smith, in five or ſix minutes time this gay ſurpriſing object fills a traveller's mind with more lofty notions of the Great Creator's wiſdom and magnificence beſtowed upon the inferior part of the animal world, than ever it was capable of entertaining before. A mackarel juſt taken out of the ſea is the moſt beautiful of Engliſh fiſhes, in our author's judgment; but its colours are infinitely ſhort of thoſe of a dolphin.

There is a ſtellar-fiſh of a very ſtrange and ſingular form, of which Mr. Winthorp has given ſome account in the Philoſophical Tranſactions, and which highly merits the attention of the curious. This fiſh ſpreads itſelf from a pentagonal root into five branches, each of which is divided into two, and theſe ten branches are ſubdivided into twenty, theſe again into forty, and ſo the ſubdiviſion continues till the little ramifications amount to 81,920; beyond which

our author could not certainly trace the expanſion, though poſſibly each of theſe ſmall threads might, if examined whilſt the fiſh was living, have been found to be farther ſubdivided. Its body reſembles an Echinus, or egg-fiſh, the main branches a ſtar, and the diviſions of the branches the plant miſletoe.

The echinus, or ſea-urchin, though not peculiar to the ſeas of America, deſerves to be mentioned. There are ſeveral ſpecies of this ſhell-fiſh, but thoſe are moſt properly called ſo which are covered with prickles, reſembling thoſe of the land-urchin, or hedge-hog. The mouth of this fiſh is placed on its under part, touching the ground, and is armed with five teeth, which meet at their extremities in a point, that they may all work together. The ſtomach and bowels fill the inſide of the ſhell, which has ſeveral little holes in it to give free liberty to the action of thoſe ligaments that are to move the prickles, which ſerve the animal for a covering and defenſive armour. The outward extremity of the prickle is ſharp-pointed, but the other end next the ſhell is hollowed like a ſocket, and receives a little tubercle to which it is jointed. Several of theſe tubercles are ſeen on moſt of thoſe ſhells that have no prickles on them; but what is moſt remarkable in ſome ſea-urchins, is a ſort of briſtles, which they thruſt out or draw in at pleaſure. They are like ſo many ſmall tubes or reeds, and with theſe they ſuck and ſeparate thoſe juices which are their proper nouriſhment.

But

But of all the ſhell-fiſh which either the American or any other ſeas afford, perhaps none are more to be admired than the nautilus, or ſailor, which Valliſneri has prettily deſcribed, and after him the ingenious author of *Spectacle de la Nature*. The turbinated ſhell of this fiſh, which is beautified with ſtrong and lively colours, may properly be called a natural boat, ſince the little animal that inhabits it, makes uſe of it in that capacity. In calm weather he mounts up in it to the ſurface of the water, unfurls a membrane to the wind, which ſerves him inſtead of a ſail, and extends two arms, with which, like oars, he rows his little bark along. When he has a mind to dive, he ſtrikes ſail, collects himſelf within his ſhell, and, filling the remaining cavity with water, ſinks to the bottom: for the fiſh, by contracting himſelf, leaves a vacant ſpace in his boat, into which the water finds admittance through a little aperture, and by its additional gravity cauſes it to ſubſide. On the other hand, when the fiſh has an inclination to aſcend to the top, it is probable he dilates himſelf, and ſo forces the water out of his boat, by which evacuation it becomes ſpecifically lighter than the water, and conſequently riſes to the ſurface.

The ſoldier-crab, or hermit, is a very remarkable kind of ſhell-fiſh, deſcribed by Rondeletius, and other naturaliſts, as living in a houſe not his own, and owing its ſecurity to the labour of another, though nature has provided it with a ſhell, and given it claws to defend and

ſubſiſt itſelf in an honeſt manner. It is the cuſtom, it ſeems, of this fiſh to take poſſeſſion of the firſt ſhell he finds empty, and ſometimes ſeveral of them meet naked, and contend for the ſame habitation; in which caſe he that has the ſtrongeſt pincers carries the day. Here the conqueror takes up his lodging for ſome time, till being grown too big for his houſe, he quits it, and ſeeks out another of a convenient ſize, where he ſtays till he is tired of it, or is grown too bulky, and then he removes again. This is the account that naturaliſts give of this fiſh; but the French author lately mentioned, does not think it deſerves the character of a lazy animal, that lives by the labour of others, as it is uſually repreſented; for nature, ſays he, knows no ſuch principle as idleneſs, nor ever acts without reaſon or wiſe deſign. The truth is, the body of this fiſh, called by the French the poor man, or the hermit, is flabby, and covered with a thin ſhell inſufficient for its ſecurity; which obliges it to take ſhelter in ſome of thoſe empty ſhells, which are of no uſe but to ſuch a tenant.

VEGETABLES.

AMONG the vegetable productions of South America, one of the moſt remarkable is the aloe, which has very thick green leaves, broad towards the root, and tapering to

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a point ſtiff and prickly, and yielding a kind of cotton, of which laces may be made. From the middle of the leaves ariſes a ſtem, which bears the flowers and fruit. The flowers grow at the end of branches, that ſhoot out oppoſite to each other, and each conſiſts but of one leaf, cut into ſix ſegments, at the top like a hyacinth. The fruit is oblong and cylindrical, divided into three cells, in which are contained flat, and for the moſt part ſemicircular ſeeds. Moſt of the African ſorts produce flowers with us annually, when grown to a ſufficient ſize; but the American aloe, which moſt commonly produces its flower-ſtem immediately from the center of the plant ſeldom flowers till it be of a great age, and this but on e during the life of the plant; ſo that to have one flower in England, is reckoned a curioſity, and generally draws a vaſt number of ſpectators. It is obſerved, that when the flower-ſtem, which is uſually large, and grows to a great hight, begins to ſhoot from the middle of the plant, it draws all the nouriſhment from the leaves; ſo that, as the ſtem advances, the leaves decay; and when the flowers are full blown, ſcarce any of the leaves remain alive; but whenever this happens, the old root ſends forth numerous offsets; and it is only at this time that ſome of theſe aloes can be propagated.

Dr. Merret tells us, that he had an American aloe, conſiſting of eleven leaves, which was tied about with a red dry cloth, and hung up, without oil, in his kitchen. In a whole year he obſerved it loſt two ounces, three drachms, and twenty-four grains of its weight. The next year

year being drier and hotter, it loſt upwards of three ounces; and more than double in the ſix colder than in the ſix hotter months. He kept it about five years, and it waſted much in the ſame proportion, till at laſt hanging it in a cold garret, it died. The doctor took notice, that every year two of the greater leaves firſt changed colour and withered, and every ſpring there ſucceeded two freſh and green ones, of the ſize of the preceding; from whence he thinks it may be probably inferred, that there is a circulation of the nutritious juice in this plant; for how is it poſſible that the roots, continuing firm and ſolid as at firſt, ſhould ſupply ſo much nouriſhment, unleſs the ſaid juice returned from the old decayed leaves into the root, and ſo produced new ones.

It is proper to obſerve, that of all the ſpecies of aloes, there are not above twelve that yield the inſpiſſated juice of the ſame name, much uſed as a purgative remedy. This juice is obtained by cutting the leaves of the plant, from whence it oozes either ſpontaneouſly or by preſſing, and is expoſed to the ſun till it becomes of a proper conſiſtence. There are three ſorts of aloes, the ſuccotrine, which is the pureſt; the hepatic, which is ſomewhat coarſer and harder; and the caballine or horſe-aloes, which is the moſt impure, blackeſt, and ſtrongeſt of all, and is of little uſe amongſt us but for horſes and cattle. Whether theſe are all procured from the ſame plant or from different ſpecies of it, authors are not agreed.

Amongſt

Amongſt the vegetables of America, one of the firſt we ought to mention, is the celebrated plant we call tobacco, which is now grown into ſuch general uſe in Europe, and makes one of the moſt profitable branches of the Engliſh commerce. The Virginian tobacco, eſpecially the ſweet-ſcented, which grows on York river, is reckoned the beſt in the world, and is generally vended in England for home conſumption; but the hotter ſorts, either of Virginia or Maryland, turn to as good account, being demanded in Holland, Denmark, Sweden, and Germany. Mr. Clayton ſays, that the ſweet-ſcented tobacco, which grows on ſandy land, is beſt for ſmoaking whilſt new, or only two or three years old: but if the ſtiff land tobacco, which is generally of a good ſubſtance, be kept five or ſix years, it will much exceed the former.

The manner of planting and ordering tobacco is this: the ſeed is firſt ſown in beds of fine mould, and when the plants are riſen to a convenient hight, they are tranſplanted to little hills three or four feet from each other, ſomewhat in the manner of hop grounds. This is done about the beginning of May, from which time the hills are kept continually weeded, and when the plants have put forth ſuch a number of leaves as they think the ſoil will nouriſh to a ſufficient ſubſtance and largeneſs, they take off the top of each plant, which after that grows no higher. If the ground be rich, they let a plant put forth twelve or fifteen leaves before they top it; if poor, not above nine or ten; and ſo in proportion to the goodneſs of the ſoil. The ſuckers

which

which the plant puts forth between the leaves are taken off once a week till it comes to perfection, which it does in Auguſt. Then in dry weather, when there is a gentle breeze of wind, they cut down what is ripe, letting it lie three or four hours on the ground; after which they carry it on their ſhoulders to the tobacco houſes, or ſheds, where a peg is driven into the ſtalk of each plant; and by theſe pegs the plants are hung up to dry, ſo near each other that they juſt touch. Thus they let them hang for five or ſix weeks, till ſuch time as the ſtem in the middle of the leaf will break in bending it; and when the air has ſo moiſtened the leaf that it may be handled without breaking, they ſtrip them off the ſtalk, tie them in little bundles, and pack them up in hogſheads, for exportation. The bundles deſigned for twiſt-tobacco, are ſteeped in ſea water, or, for want of that, in common water, then twiſted in the manner of ropes, and the twiſt formed into rolls by winding them with a kind of mill round a ſtick; and in this condition they are imported into Europe.

Mr. Clayton informs us, that ſometimes they are forced to plant their hills twice or thrice over, on account of an earth-worm which eats the root; and when the plants are well grown, they often ſuffer damage by a worm called a horn-worm, which is bred upon the leaves, and, if not carefully taken off, will ſpoil a whole crop. The plants when young, are alſo ſometimes deſtroyed by a ſmall fly, which breeds upon them in gleamy weather; and they are likewiſe ſub-

ject to a diſtemper they call firing, which happens when very hot weather ſuddenly follows a wet and cold ſeaſon, at which time the leaves of the young plants turn brown, and are dried to powder. Another fault is when the leaves do not ſpread and grow large, but rather ſpire upwards and grow tall: and ſuch plants as theſe they call Frenchmen.

Another very remarkable vegetable of North America, is the poiſon-wood-tree, which grows in New England, in ſwamps or low wet grounds, and is deſcribed by Mr. Dudley as ſomewhat like a ſmall aſh, but much more like a ſumach, which it exactly reſembles in its twigs, leaves, and ſhape, ſo that ſome call it the ſwamp-ſumach; and it likewiſe bears a dry berry. It never grows bigger than about the thickneſs of a man's leg, and as tall as an alder; but it ſpreads much, and ſeveral grow together, eſpecially about the roots of one that has been cut down. The inſide of the wood is yellow, and very full of juice, which is as glutinous as honey or turpentine, and ſtinks as bad as carrion; and the wood itſelf has a very ſtrong diſagreeable ſmell. As to its poiſonous quality, our author obſerves, that it poiſons two ways, either by the touch or by the ſmell; the ſcent of it, when cut down in the woods, or burning in the fire, being poiſonous to a great degree.

The Indian corn or maize, is the moſt prolific grain known in America, commonly producing twelve hundred grains from one, and often two thouſand.

thouſand. But the faireſt computation is this; Six quarts of this grain will plant an acre of ground, and it is not unuſual for an acre of good ground to produce fifty buſhels of corn.

Another thing very remarkable in the Indian corn is its variety of colours, as blue, white, black, red, yellow, greeniſh, ſpeckled, ſtriped, &c. and if any one ſort be planted ſeparately, ſo that no other ſort be near it, it will retain its own colour: but if in the ſame field you plant the blue corn in one row of hills, as they are called, and the white or yellow in the next row, they will mix and interchange colours; that is, ſome of the ears in the blue corn rows ſhall be white or yellow, and ſome in the white or yellow rows ſhall be blue. The little hills of Indian corn are generally four or five feet aſunder, and continued regularly in ſtrait lines, ſomething in the manner of a hop-ground; and yet this mixing and interchanging of colours has been obſerved when the rows of hills have been ſeveral yards diſtant from each other.

Mr. Winthorp deſcribes the ear of the Indian corn as generally about a ſpan long, conſiſting of ſeveral rows of grain, commonly eight or more, according to the goodneſs of the ſoil, and each row containing about thirty grains. The white and yellow ſorts are the moſt common; but he obſerves, that not only in the ſame field, but even in the ſame ear, the grains are ſometimes of different colours. The ear is cloathed and armed with ſeveral ſtrong thick huſks, which

which not only defend it from unſeaſonable rains, and from the night-colds, it being the latter end of September before it is fully ripe in ſome parts, but alſo from crows, ſtarlings, and other birds. Its ſtalk grows to the height of ſix or eight feet, more or leſs, according to the condition of the ſoil, or the kind of ſeed. The maize of Virginia grows taller than that of New England, and there is a ſort uſed by the northern Indians farther up the country, which is much ſhorter. It is always jointed like a cane, is full of a ſweet juice, and at every joint grow long leaves almoſt like flags, and at top a bunch of flowers like the bloſſom of rye. The manner of planting this Indian wheat is in rows at equal diſtances every way, as has been already mentioned; and when the corn is grown up to a proper height, they cut up the weeds and looſen the earth about it with a broad hoe, repeating this labour as often as the growth of the weeds makes it neceſſary. When the ſtalk begins to grow high, they draw a little earth about it; and upon the putting forth of the ear, they ſcrape up as much as will make a little hill like a hop-hill; after which they give themſelves no farther trouble about it till harveſt.

This culture is all done with the hoe, but the Engliſh have now taken a better way of planting. With the plough they make ſingle furrows through the whole field at the diſtance of ſix feet, or as they ſee convenient; and to theſe they make croſs furrows at the ſame diſtance. Where

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theſe furrows interſect each other, they throw in the corn, and cover it either with the hoe, or by running another furrow with the plough. When the weeds begin to over-top the corn, they plough the reſt of the field between the planted furrows, and ſo turn in the weeds. This is repeated when they begin to hill the corn with the hoe, and thus the ground is looſened, and the roots have liberty to ſpread. The huſks that grow about the ear of this corn, the Indian women ſlit into narrow ſlips, and weave them curiouſly into baſkets of ſeveral faſhions.

On the ſides of the hills in Virginia, grows plentifully a ſpecies of aſarum, or black ſnake-weed, the roots whereof are brought over among the true ſerpentaria Virginiana, and are promiſcuouſly uſed with them, being diaphoretic and alexipharmic.

In ſpeaking of the vegetables of America, which make a part of the Materia Medica, we ought by no means to omit ſaſſafras, which is a yellow wood, of a briſk aromatic ſcent, the produce of a tree, whereof there are vaſt numbers in Florida, and alſo in Virginia, and other Engliſh provinces. The natives of Florida call it pahamwe, and amongſt us it has obtained the name of fennel-wood, its ſmell ſomewhat reſembling that of fennel.

In New Spain, and ſeveral other parts of the Weſt Indies, grow thoſe ſeeds we call vanillas, vanelloes, or banillas, which are uſed as an in-

gredient in chocolate, to which they give a pleaſant flavour; and they are alſo uſed to perfume ſnuff and tobacco.

FOSSILS.

THE Spaniſh dominions in North-America abound with mines of gold and ſilver, eſpecially ſilver, of which metal, it is ſaid, there are no leſs than a thouſand mines in the Mexican empire; but many of theſe are not wrought for want of hands. It is ſaid, that Louiſiana yields vaſt plenty of copper, and ſo fine, that it is frequently found on the ſurface, in pieces very pure, without melting; and thoſe who have tried the ore, ſay, that by the common methods, it yields above forty *per cent.* The lead ore in that country affords ſixty *per cent.* and has been diſcovered in quantities more than ſufficient for common uſe. Iron ore is alſo found plentifully in many parts, near the ſurface of the earth, from which a metal is extracted, little inferior to ſteel in goodneſs. Some mines of quickſilver have likewiſe been diſcovered.

Great quantities of orpiment and ſandarach are found in divers parts of Louiſiana; and writers on metals and minerals affirm, that they not only contain gold, but where they are found,

they are generally the covering of mines of gold or ſilver.

As to the gems of Louiſiana, all that Mr. Coxe knows of, are amethyſts, of which there are very fine and large; and turquoiſes, thought to be as fine and large as any in the world. There is alſo an account of lapis lazuli, which, according to thoſe ſkilled in mines, is another indication that gold is at no great diſtance.

We ſhall here take notice of the filtre-ſtone of Mexico, though perhaps it ſhould rather be referred to the vegetable kingdom. It is ſaid to grow under water on the rocks, in ſome parts of the Gulph of Mexico, and to harden and petrify ſpontaneouſly in the air; but Dr. Vater, who has given ſome account of it in the Philoſophical Tranſactions, does not take upon him to determine its origin, nor the manner of its growth, both appearing to be very ſuſpicious. It has obtained the name of filtre, from its poroſity, whereby it lets liquors paſs through it; and for this reaſon, pots and mortars are made from large pieces of it, to ſtrain liquors, particularly water to drink; for it is thought, that water filtrated through this ſtone, is thereby freed from all its impurities, and becomes more wholeſome. This is the reaſon, ſays the doctor, that theſe ſtones are highly valued in Japan, and ſold at the price of gold; becauſe the Japaneſe, who know nothing of the ſtone, or other diſorders in the kidnies, and who prefer health far before all other bleſſings, think the filtration

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of their drink contributes to the prolonging of life.

We have already in ſeveral places taken notice of the extraneous foſſils that are found in different parts of the world, and particularly of the bed of oyſter-ſhells near Reading in Berkſhire; but this ſeems trifling, compared to the accounts we have of the vaſt quantities of theſe ſhells found in Virginia, where for many miles together, the earth is intermixed with them to the depth of ſeveral yards. In ſome places, the ſhells lie cloſely bedded together, and look like the veins of a rock, of which ſome are three or four yards thick, and as hard as free-ſtone. Of theſe rocks of oyſter-ſhells, which are not ſo much petrified, they burn and make all their lime; and in the looſer banks of ſhells and earth, there are often found perfect teeth petrified, ſome of which are two or three inches long, and above an inch broad, the part that one may ſuppoſe to have grown out of the jaw, being poliſhed, and almoſt as black as jet. The back-bones and ribs of whales, according to Mr. Clayton, have alſo been dug up many miles diſtant from the ſea.

CAVES, LAKES, CATARACTS, &c.

A Traveller gives us an account in the Philoſophical Tranſactions, of a remarkable cave, ſome leagues to the north-weſt of Mexico,

gilded all over with a ſort of leaf-gold, which had deluded many Spaniards by its promiſing colour, for they could never reduce it into a body, either by quickſilver or fuſion. Our author went thither one morning, with an Indian for his guide, and found its ſituation was pretty high, and in a place very proper for the generation of metals.

On the weſtern coaſt of Mexico there is a vaſt hollow rock, which having a large hole at the top, makes a frightful noiſe at every ſurge of the ſea, and ſometimes ſpouts up water like a whale, to a prodigious height: but though this is told as ſomething wonderful, we imagine there is nothing in it but might eaſily be accounted for.

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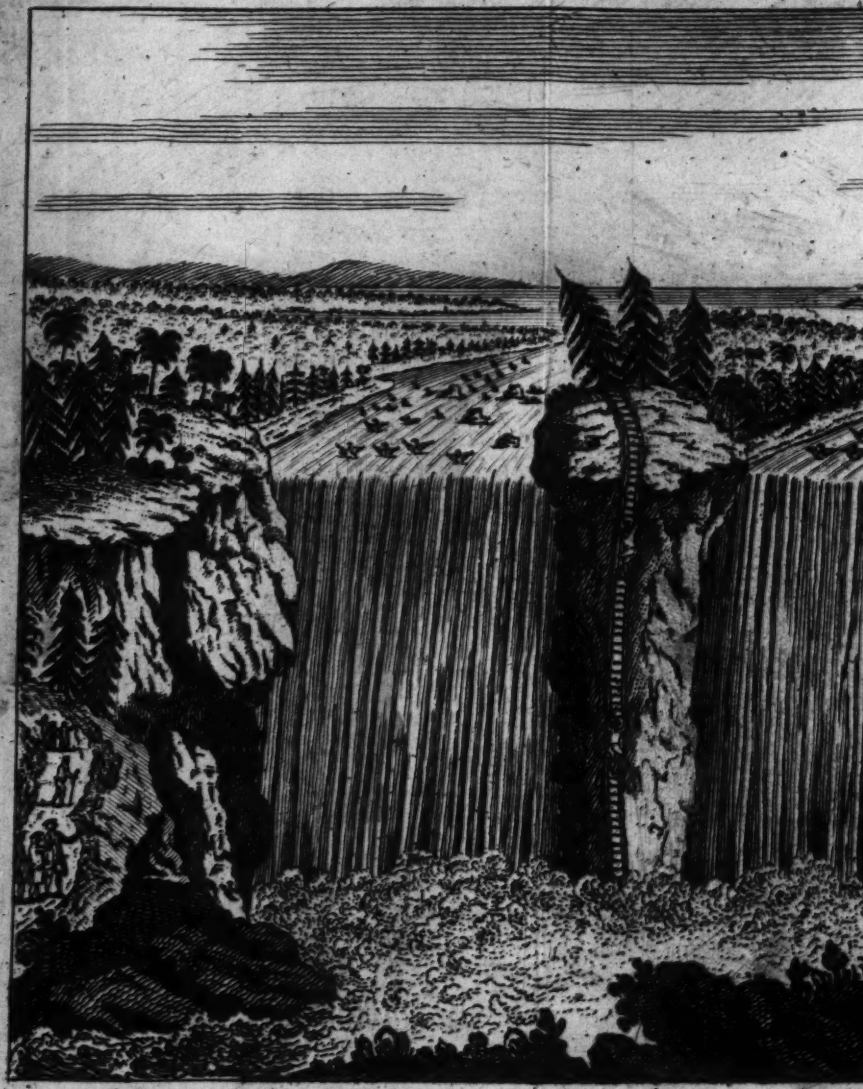
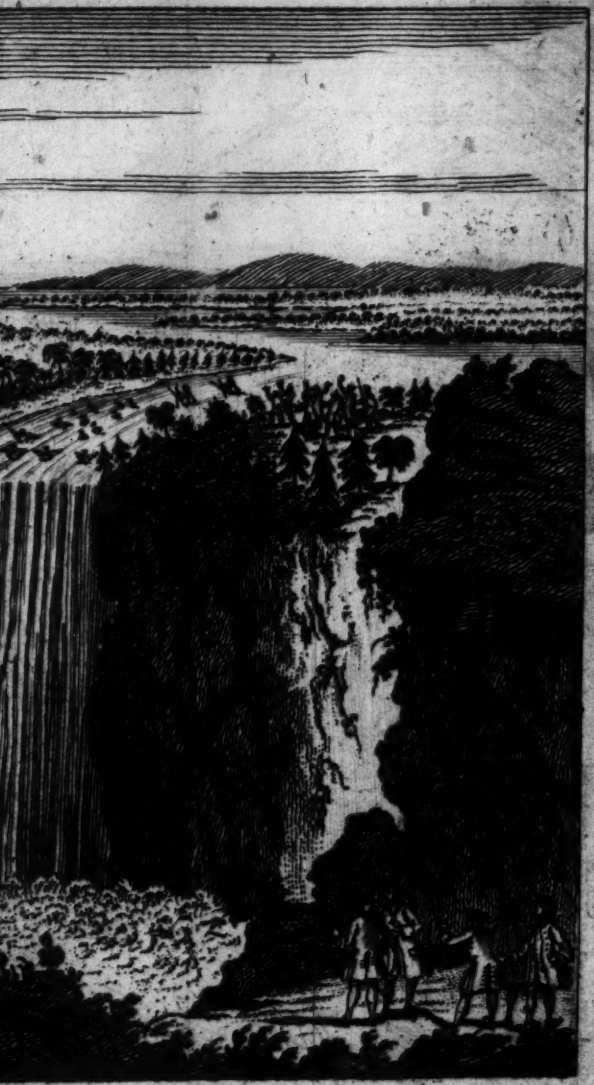
The large lakes of Canada deſerve to be mentioned, the principal of which are five in number, and are ſometimes called ſeas, on account of their extent. That called the Upper Lake, or the lake of the Nadoueſſons, is eſteemed at leaſt an hundred and fifty leagues in length, ſixty in breadth, and five hundred in circumference. It is all over navigable, and has ſome iſlands, eſpecially one called Minong, above threeſcore miles in compaſs, wherein both the Indians and French affirm there is a great mine of very pure copper, the ore affording three fifths of fine metal, without any preparation beſides melting. It is remarkable of this lake, that all along the ſhore on the ſouth ſide it is not above four or five fathoms deep, but



A View of the Fall of Ni



Walter Sculp

iagara .

but gradually increaſes in depth as we paſs over to the north, till no bottom is to be found at a hundred and fifty fathoms.

In the river Niagara, which forms a communication between two of theſe lakes, there is one of the moſt ſurpriſing cataracts, or falls of water, yet diſcovered in the world. Father Hennepin, a French miſſionary among the Canada Indians bordering on its banks, has deſcribed this prodigious caſcade as falling down a precipice a hundred fathoms high, which is ſix hundred feet: but the cataract, properly ſo called, is no more than twenty-ſix fathoms, or a hundred and fifty-ſix feet; which is a prodigious thing, and what the world cannot parallel, conſidering the largeneſs of the river, which, ſtraitened as it is in that part, is near a quarter of an Engliſh mile broad, and very deep water. Both above and below theſe falls the river is much wider, and from below there is no coming nearer them by water than about ſix Engliſh miles, the torrent is ſo rapid, and the whirlpools ſo terrible.

He farther obſerves, that the miſt or ſhower which the falls occaſion, is ſo extraordinary as to be ſeen at five leagues diſtance, and riſes as high as the common clouds. In this miſt, when the ſun ſhines, there is always a glorious rainbow.

The river of St. Laurence, a name given it by the French, is the largeſt in North-America, and inferior to few in the world, being compu-

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ted to be about thirty leagues broad at the mouth, and two hundred fathoms deep: it takes its riſe, as is ſuppoſed, from ſome of the great lakes above-mentioned, and falls into the Gulf of St. Laurence, at the Iſle of Anticoſti, having received many other rivers in its courſe, which is generally reckoned to be about eight hundred leagues. The ſource being unknown, the length of its courſe cannot be determined. The river in general is very deep, nor is its navigation interrupted by cataracts, till a great way above Quebec, which is more than three hundred miles from the ſea. There are many pleaſant iſlands in it, ſome of which are inhabited, well cultivated, and fertile.

The Miſſiſippi, Meſſaſippi, or Meſchacebe, as Mr. Coxe calls it, is another very large river, which runs from north to ſouth through the greateſt part of Florida, or Louiſiana, and empties itſelf by two mouths, Coxe ſays ſeven, into the Gulf of Mexico, after having received innumerable rivers in its courſe. The ſource of this river is likewiſe not certainly known.

SECT.

SECT. III.

Deſcriptions of ſome of the moſt remarkable public Buildings, and other ſingular Productions of Art in North-America. *Curious Remains of Antiquity; with ſome ſhort Account of the antient and modern Inhabitants.*

WE ſhall next conſider the preſent and antient ſtate of the city of Mexico, now an archbiſhop's ſee, and the ſeat of a Spaniſh viceroy, and formerly the capital of a great and opulent empire.

This famous city ſtands on a lake of its own name, on the eaſt ſide of a valley, at the foot of a ridge of hills; and is only to be approached by five cauſeys: but has no gates, walls, or artillery. It is one of the moſt regularly built cities in the world, the ſtreets being ſtraight, and croſſing one another at right angles, and in the narroweſt of them three coaches may go abreaſt. It is almoſt quadrangular, being more than five miles one way, and little leſs than four the other, and contains about an hundred thouſand inhabitants.

The ſtreet where the mercers expoſe their ſilks, has a very grand appearance; and that where the tradeſmen reſide, who deal in braſs, ſteel, and iron ware, is very long and ſpacious: but

but the ſtreet inhabited by the nobility, gentry, and lawyers, without any ſhops intermixed, exceeds all the reſt for ſtately buildings, the principal whereof is the fine palace of the marquis del Valle, the ſucceſſor of Cortez, who conquered Mexico, which ſtands on the ground where the palace of the Emperor Montezuma ſtood, and is deſervedly admired for its ſtructure and dimenſions.

About ſeven leagues from the city there ſtill remain two remarkable pieces, viz. the pyramids of the ſun and moon, the founders of which are not known. They appear cut out in ſteps like thoſe of Egypt; and on the top of them formerly ſtood two images of a monſtrous ſize, repreſenting the ſun and moon, which the Indians worſhipped. The pyramid of the ſun ſtands about two hundred paces from the other, and is about a fourth part higher.

The buildings of the Indians, even thoſe who have ſubmitted to the Spaniards, and embraced their religion, deſerve no deſcription, they live in thatched huts, or cottages, and obſerve little regularity in laying out their ſtreets. Their houſes are not contiguous, nor in any order; only they have one common guard-houſe, ſituate on an eminence, whither they reſort on the approach of an enemy, or when they aſſemble in council. Their method of building, is to ſet up poſts, ſeven or eight feet high, and two or three feet aſunder, and having wattled up the intervals they cover them with clay. The roof

roof is made like that of our barns, and uſually covered with Palmetto leaves, a hole being left in the middle to let out the ſmoke. Inſtead of beds, they uſe hammocks, which are hung up on the principal beam, from one end of the houſe to the other; nor have they any ſeats or tables, but blocks of wood. Their furniture conſiſts of pots, pans, and other kitchen utenſils, with calabaſhes, or gourds of an uncommon ſize, to hold their liquor: and their arms and other implements were hung round the cottage as ornaments. Their guard-houſe is generally about a hundred and thirty feet long, five and twenty broad, the walls nine or ten feet high, and the roof covered in the ſame manner as their cottages. They have narrow loop-holes on the ſides, from whence they can annoy an enemy with their arrows, eſpecially as the ground is cleared of wood and ſhrubs all round to a conſiderable diſtance. However, by ſhooting flaming arrows into the thatch, theſe light fortreſſes are eaſily deſtroyed.

The Mexicans of the open country, who have ſtill preſerved their liberties, of whom there are great numbers, are people of humanity, brave, generous, active, and unacquainted with the ſordid vices of thoſe who live in towns among the Spaniards. Every man builds his own houſe, and makes his own arms and implements, and great part of their time is ſpent in hunting, ſhooting, and fiſhing. They cultivate but little ground, planting juſt enough Indian corn, roots, &c. to ſerve the neceſſities of the family;

family; and these plantations are left to the care of the women, after the men have cleared the ground. The women also spin and weave their cotton, do the houshold business, and in every thing serve their husbands with chearfulness and alacrity. They even follow them when they go a hunting, and carry provisions, with calabashes, or gourds for their drink, and pipkins to dress their food. Every man breeds up his son to the exercises of hunting and shooting, at which last, the very boys are so dextrous, that they will split a cane with an arrow at the distance of twenty yards.

The Mexicans have their dances and their music, such as drums, and pipes; and indeed they seem to love every thing that makes a noise, be the sound ever so disagreeable. They frequently dance thirty or forty in a circle, humming a kind of tune all the while, stretching out their hands, and laying them on each other's shoulders. The women likewise have their dances and music, and other diversions by themselves.

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END OF THE TENTH VOLUME.